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Confirming Purchase Orders must be marked "Confirmation – Do Not Duplicate" or restocking charge will apply.

PAYMENT:

MasterCard, VISA, American Express, Company Check COD upon credit approval, or prepaid by Money Order. Open account available for qualified institutions and companies. US funds only.

INTERNATIONAL ORDERS:

Overseas orders may be prepaid with international bank check or money order payable through U.S. bank in U.S. funds, or bank funds transfer (TT). ELECTRONIX EXPRESS reserves the right to request pre-payment by above options only.

MINIMUM ORDER:

$20 minimum *(International Orders: $100 minimum)* for merchandise, shipping extra.

PRICES/QUANTITIES:

Prices subject to change without notice. Quantities may be limited. We are not responsible for typographical errors.

DELIVERY:

Orders are shipped FOB origin. Normal method via United Parcel Service (UPS) ground or FedEx ground for lower 48 states. UPS and FedEx requires street addresses. Specify instructions for international orders. Hawaii and Alaska via UPS blue. For UPS next day, 2nd day or 3rd day, specify in space provided.

SHIPPING CHARGES:

OPEN ORDERS - UPS chart plus handling and insurance charges will be billed at cost.
PREPAID ORDERS - Shipping charges for UPS ground – minimum $6 or 5% of the order, whichever is greater.
INTERNATIONAL ORDERS - Please contact us for charges.
ALL ORDERS - Additional charges for UPS Next Day, 2 Day and 3 Day.

BACK ORDERS:

We stock most items listed in this catalog. Any item not available for immediate shipment will be back ordered. Please advise us if you do not wish to accept or pay for a partial shipment.

CLAIMS AND RETURNS:

A) No returns without a valid return authorization number (RMA NUMBER) issued by ELECTRONIX EXPRESS.
B) No collect or COD returns.
C) All returns must be made within 30 days of the invoice date.
D) All returns must be in the original packaging and in resalable condition.
E) Items returned subject to a 20% restocking charge.
F) "Special Ordered Items" and custom packages are non-returnable.
G) Defective merchandise must be returned within 90 days of receipt and accompanied with a copy of the invoice. This warranty does not apply to items which have been subjected to misuse, abuse, neglect, accident or modification or which have been soldered or altered during assembly. In no event shall our liability exceed the buyer's purchase price.
H) No refunds on shipping charges on returns.
NOTE: ELECTRONIX EXPRESS does not accept returns for any reason on any educational construction kits. projects, or any item which requires assembly.

SALES TAX:

Please be advised that we collect and remit sales taxes only to the state of New Jersey. If your purchases are subject to sales tax in another state, it is your responsibility to remit the proper tax to that state.

MAIL/FAX FRIENDLY ORDER FORM

PLEASE MAKE A COPY OF THIS ORDER FORM. USE COPY TO PLACE YOUR ORDER. SAVE THE ORIGINAL FORM FOR FUTURE USE

BILL TO/SHIP TO: (if same location)

Customer Number (If Known)

Name

Department

Company/School

Address

City/State/Zip **Country**

Phone Number

SHIP TO:

Name

Department

Company/School

Address

City/State/Zip **Country**

Phone Number

FAX Number

METHOD OF PAYMENT

PURCHASE ORDER NO. _____ (Net 30)

SHIP VIA _____

❑ Visa ❑ Mastercard ❑ American Express ❑ C.O.D. – Company Check Upon Credit Approval ❑ Money Order ❑ Certified Check

SORRY - WE CANNOT ACCEPT PERSONAL CHECKS

CREDIT CARD NO. _____ **EXP. DATE** _____

NAME ON CARD _____ **SIGNATURE** _____

QTY.	PART NO.	DESCRIPTION OF ITEM	COST EA.	EXT. PRICE

MINIMUM ORDER - $20.00
SHIPPING EXTRA

Thank You For Your Order We Appreciate Your Business

Sub Total	
7% NJ Sales Tax (NJ Residents Only)	
Shipping	
TOTAL OF ORDER	

FOR COMPANY USE ONLY

ELECTRONIX EXPRESS

1-800-972-2225

FAX: 1-732-381-1006
1-732-381-1572

IN NEW JERSEY:
1-732-381-8020
900 HART ST.
RAHWAY, NJ 07065

WEBSITE: http://www.elexp.com • EMAIL: electron@elexp.com

SUPER ECONOMY *PLUS* DMM

MODEL MAS830

- **Display:** 1999 counts, 15mm Digit Height
- **DC Volts**: 200m / 2V .5%, 20/200/600V .8%
- **AC Volts**: 200/600V 1.5%
- **DC Current**: 200 /2m/20mA 2%, 10A 3%
- **Resistance:** 200/2K/20K/200K/2M 1%
- Diode Test
- Data Hold
- Continuity Test
- Size: 138 x 69 x 31 mm
- Protective Rubber Boot Included

Part No.	1-9	10+
01DMMAS830	$11.95	$11.25

RSR

DIGITAL MULTIMETER – AUTORANGING

Features:

- 3 3/4 digits LCD display
- **LED / Sound Warning when incorrect** banana jacks are used relative to function switch setting (volt, amp, resistance)
- Data hold and LCD back lit
- Manual ranging and autorange mode
- Safety as per IEC1010-1 Cat. II 600V and Cat. 1000V Cat. II

Technical Specifications:

- DCV: 400mV – 1000V, 5 ranges
- ACV: 400mV – 750V, 5 ranges
- Resistance: 400-40M, 6 ranges
- DC and AC Current: 400 – 10A, 5 ranges
- Capacitance: 4n – 200 , 6 ranges
- Frequency: to 200KHz
- Resettable fuse inside
- Diode and transister test, audible continuity
- Dimension and Weight: 195 x 92 x 55mm; 400g
- Battery: 15.V AAA

Part No. 01DMMS8268 • Price: $33.95

RSR POCKET DMM

W/BARGRAPH – *MODEL 113*

- Analog bargraph
- 3200 count display
- Auto power off
- Low battery indicator
- Range hold; data hold
- Auto and manual ranging on DCV, ACV and resistance
- Continuity buzzer

Part No.	Price
01DM113	$20.50

RSR

DIGITAL MULTIMETER

Only $6.50 10+

SUPER ECONOMY

MODEL 820B

- **Display:** 1999 Count (0.5%)
- **DC Volts:** 200mv/2v/20/200/1000 (.5%)
- **AC Volts:** 200/750v (1.2%)
- **DC Current** 200 /2m/20m (1%) 10A (2%)
- **Resistance:** 200/2K/20K/200K/2M (1%)
- **HFE** 1–1000 NPN, PNP Transistors
- Diode Test
- **Size:** 126 x 71 x 28mm
- Includes test leads

Part No.	1-9	10+
01DM820B	$7.50	$6.50

DIGITAL MULTIMETER

Best Seller!

32 RANGES – 3 1/2 DIGIT

MODEL MY-64

This multi-function DMM has just about everything, including a low price. In addition to standard volt/ current/resistance features, it also offers temperature, capacitance, frequency and diode/transistor testing.

- 30 x 60 mm LCD Display
- Temperature: –20 C – 1,000 C
- Auto Power Off
- Capacitance – 5 ranges 4%
- Diode check, HFE 1 ~ 1,000
- Frequency
- AC/DC voltage, current, resistance
- Protective rubber boot included
- Continuity Buzzer
- Size: 91 x 189 x 31 mm

SPECIFICATIONS:

DC Volts:	To 1,000V, 5 Ranges
AC Volts:	To 700V, 4 Ranges
DC Current:	To 10A, 4 Ranges
AC Current:	To 10A, 4 Ranges
Resistance:	To 200m, 7 Ranges
Capacitance:	5 Ranges to 20 F
Frequency:	20KHz 1.5%

Part No.	1-9	10+
01DMMY64	$33.95	$32.50

DIGITAL MULTIMETERS

RSR DIGITAL MULTIMETER

TRUE RMS, AUTO RANGING, RS232

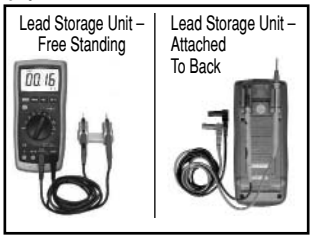
- **LED/audio warning if test leads are not in proper jacks**
- 3-3/4 Jumbo LCD display 4000 count with symbolic signs.
- Auto Ranging High Voltage test up to 1000V DC and 750V AC
- Measure Resistance up to 40M ohm
- Measure Temperature up to 300 C
- Measure Frequency up to 400k Hz
- Measure Capacitance up to 40uF
- Transistor test
- Low Battery Indication
- Relative measurement function
- Range Hold, Data Hold and Auto-Off Function
- Use 2 X 1.5V AAA battery
- Size: 185 X 86 X 33 mm
- Temperature lead optional

Part No.	Description	Price
01DMHH2205E	Digital Multimeter	$65.95
05TL8229	Temperature Lead	4.95

RSR DIGITAL MULTIMETERS

MODEL MS8217

- Auto and Manual range selection
- Large, easy-to-read LCD display
- Secondary injection molded rugged case
- High quality test leads with detachable storage unit on back of meter
- Diode Test, Data Hold/Max, Auto-off and Continuity Check
- Dimensions: 185(L) x 87(W) x 53 (H) mm
- Weight: 360 g included 3 AAA batteries
- Frequency and Duty Cycle Measurement: 10Hz ~ 100KHz, 5 ranges
- Capacitance: 5 ranges to 100 F
- Relative Measurement: Relative measurement in all functions except frequency.
- Temperature Function: –55 C ~ 1000 C
- AC/DC Voltage: 400mV, 4V, 40V, 400V, 1000V ranges
- AC/DC current: 400 A, 4000 A, 40mA, 400mA, 4A, 10A ranges
- Resistance: 6 ranges to 40M



Part No.	Description	Price
01DMMS8217	DMM with Enhanced Features	$44.95

tpi DIGITAL MULTIMETER

EXTRA LARGE DISPLAY

MODEL TPI 133

- 3 year warranty, UL listed.
- Large size (1.2" x 3.5" x 7.4").
- Protective rubber boot included.
- Diode test, continuity buzzer, data hold

DC Volts: 1,000V, 5 Ranges. 0.5% Accuracy
AC Volts: 750V, 5 Ranges
Resistance: 20M, 6 Ranges
AC/DC Current: 10 Amp, 6 Ranges

Part No.	Description	Price
01DM133	Model TPI 133	$58.95
01A100	Soft Pouch	9.90

DIGITAL MULTIMETER KIT*

WITH CAPACITANCE/ HFE CHECKER

MODEL 2666K

An affordable way to get a high quality digital meter. This meter features all the standard functions, plus capacitance and hfe checker, diode tester, low battery indicator and overvoltage protection. Complete with easy to follow assembly instructions.

SPECIFICATIONS:

DC and AC Voltage:
200mV, 2, 20, 200, 1000
DC and AC Current:
200 A, 2mA, 20mA, 200mA, 20A
Resistance:
200, 2K, 20K, 200K, 2M, 20M
Capacitance:
2nf, 20n, 200n, 2 , 20 f, 200 F
Diode Test
hFE Measurement
Audio Continuity
Rubber Holster

ADVANCED KIT: Need previous knowledge of electronics, good soldering techniques. Assembly is more complex.

Part No.	1-9	10+
01DMM2666K	$38.95	$36.95

DIGITAL MULTIMETER KIT

ECONOMY MODEL

MODEL 1006K

Low cost standard feature digital multimeter kit. Features 18 ranges, transister test and diode test.

SPECIFICATIONS:

DC and AC Voltages:
200mV, 2V, 20V, 200V, 1000 (750VAC)
Accuracy: 1.2%
DC Current:
200 A, 2mA, 20mA, 200mA, 10A
Resistance:
200, 2K, 20K, 200K, 2MΩ
Size: 5" x 3" x 1"

Part No.	1-9	10+
01DMM1006K	$14.95	$12.95

Global Specialties DIGITAL MULTIMETER

Model Pro-50A

Ideal for schools and educators looking for a model with easy fuse replacement (one screw removes back of case). Very rugged unit.

- Measures temperature, frequency, capacitance, volts, amps, resistance
- Protective rubber boot and temperature probe
- Transistor hfe test
- 1,000VDC / 750VAC. 3 digit. .5% accuracy DCV
- Data hold, auto power off, overload protection
- Non-contact AC voltage detection

Part No.	Description	Price
01GLPRO50A	Digital Multimeter	$49.00

RSR

DIGITAL MULTIMETER

W/ FREQUENCY COUNTER, CAP TESTER, TRANSISTOR TESTER, AND AUDIBLE CONTINUITY BEEPER

Complete With Carrying Case

MODEL DM717

Best Value!

This meter's rugged design structure, compact size and high accuracy make it the choice for servicemen, students and hobbyists. This lightweight, hand-held LCD meter features 10 functions, including hfe, freq. and cap functions, input overload protection, carrying case, leads, spare fuse and battery.

SPECIFICATIONS:

DC and AC Voltage:
0 to 200 mV, 2V, 20V, 200V, 600V, 0.9% accuracy, 10M ohm input impedence, 100 V resolution.

Resistance:
0 to 200 ohms, 2K, 20K, 200K, 2M, 20M accuracy 1.5%.

DC and AC Current:
0 to 2mA, 20mA, 200mA, 10A, 2% accuracy

Capacitance:
2nF, 20nF, 200nF, 2,000nF, 20 F, 5% accuracy.

Frequency: 2KHz, 15MHz
AC/DC Current to 10A – 4 Ranges

Part No.	Description	1-9	10+
01DM717	Multimeter	$45.50	$42.95
05CLS77	Capacitor Adapter Probes	4.90	3.95
05TLS77	Transistor Adapter Probes	4.90	3.95

AUTO-RANGING DMM

3 3/4 DIGIT + BAR GRAPH

MODEL DM326

- Auto-Ranging; Auto Power Off
- Data Hold
- 4000 Count Digital Display
- Safety and Overload Protection
- Analog Bar Graph Display
- Shock Proof – Special structure allows drop from 6 feet.

Autoranging for AC voltage, DC voltage, resistance and 3 AC/DC current ranges. Has data hold, continuity beeper and diode test.

Part No. 01DM326 • Price $37.95

RSR

DIGITAL MULTIMETER

3 1/2 DIGITS LCD DISPLAY

MODEL MS8264

DC Voltage:	200mV to 1000V, 5 Ranges
AC Voltage:	2V to 750V, 4 Ranges
DC Current:	20mA to 10A, 3 Ranges
AC Current:	2mA to 10A, 3 Ranges
Resistance:	200Ω to 200MΩ, 7 Ranges
Capacitance:	2nF to 20 F, 5 Ranges
Temperature:	–20 C ~ 1000 C

ADDITIONAL FEATURES
- Diode Check, HFE 1 ~ 1000
- Continuity beeper
- Frequency – Range to 20KHz
- Low battery indication
- Size – 8"(L) x 3.6" (W) x 2.2" (H)
- Weight – Approx. 14 oz.

Included: User's Manual, test leads, carrying case, "K" type bead thermocouple and special multi-function socket.

Part No. 01DMMS8264 • Price: $28.95

DIGITAL MULTIMETER

3 1/2 DMM - 10A / HOLD FUNCTION / BACKLIGHT

- DMM with automatic polarity function and 3 digit LCD display
- Measurements: DC current up to 10A, AC and DC voltage up to 600V, resistance up to 2M ohm
- Diode, transistor and continuity test with buzzer
- Data-hold function and backlight
- Protection holster included

Part No. 01DM850BL • Price: $12.95

velleman

MINI 3 1/2 DIGIT DMM

19 RANGES

- DC Voltage: 200M - 500V
- AC Voltage: 200/500V
- DC Current: 200u - 10A
- Resistance: 200 - 2M
- Diode & Transistor test
- Auto polarity indication

Part No. 01DVM810 • Price: $6.95

RSR

POCKET DMM EXTRA THIN AUTORANGE

3 3/4 DIGIT LCD

MODEL MS8216

- Data Hold
- Relative measurement
- Auto power off
- Continuity beeper
- Diode test
- DC Voltage to 600V
- AC voltage to 600V
- Resistance to 40MΩ
- Capacitance to 200 F
- Frequency to 100KHz
- Duty cycle
- Power 2 x 1.5V AAA
- Dimension: 4.3" x 3" x 0.5"

Part No. 01MS8216 • Price: $14.50

DIGITAL MULTIMETERS

TRIPLETT DIGITAL MULTIMETER

MODEL 9007

- 31 Measurement Ranges
- Huge 1.4" tall High Contrast LCD display
- White LCD Backlight allows viewing in poorly lit areas
- 3 1/2 digit resolution (2000 counts)
- CAT IV Rated
- High Performance Construction
- AC/DC Voltage & Current Ranges
- Capacitance Test
- Diode Test
- Continuity Beeper
- Auto Power Off
- Fused uA, mA, and Amp ranges
- Overload protection
- Double Insulated
- CE Mark (EMC / LVD)
- CAT I, II, III, and IV compliance
- Protective shock absorbing overmolded shell
- Built in stand and test lead holders
- Includes safety leads and 9V battery
- Three year warranty

Part No. 01DM9007 • Price $69.95

TRIPLETT COMPACT DIGITAL MULTIMETER

BACKLIT DISPLAY AND TEMPERATURE TEST

- 3 1/2 Digit with 1999 max reading
- Bright, White Backlit Display
- 19 Total Ranges/Functions
- AC/DC Voltage to 600 Volts
- DC Current to 10 Amps
- Temperature Test from -4 to 1832 F
- Continuity Test
- Diode Test
- Transistor Test
- Auto Power Off and Date Hold
- Cat I and II Rated
- Three Year Warranty
- Includes: Safety Test Leads with Screw-on Alligator Clips, K-Type Thermocouple Probe and 9 Volt Battery

Part No. 01TR1101B • Price: $49.95

TRIPLETT CORPORATION DIGITAL MULTIMETER

TRUE RMS, w/TEMP., CAP.,FREQ.

- Auto ranging, 3 3/4 LCD
- 61 Segment Bargraph
- DC voltage up to 1000V
- AC voltage up to 750V
- Auto power off
- Cop test, Freq., Temp.

Part No. 01DM9045 • Price: $115.00 ***MODEL 9045***

BK PRECISION DIGITAL MULTIMETER

TRUE RMS; 4 1/2 DIGIT

MODEL 391A

- True RMS reading
- 0.05% DC accuracy
- 20,000 count LCD
- Measures voltage to 1,000 VDC & 750V AC; amps to 20A DC & AC
- Frequency measurement
- Duty cycle measurement
- Data hold, Logic Probe function
- All current ranges fused
- Rubber holster included

MODEL 391AKIT

Kit includes spring-load tip miniature probes for testing those micro-sized circuits
Test Lead Accessories Include:

- 1.5 meter long silicone 4mm sheathed straight to right-angle plug lead set
- Flexible pincer set – red and black
- Probe body set with 2mm (0.80") diameter tips
- Miniature spring-tip probe – red and black
- Tri-fold nylon pouch

Part No.	Description	Price
01DM391	DMM	$199.00
01DM391AKIT	DMM With Test Lead Set	260.00

RSR ENVIRONMENTAL TESTER + MULTI FUNCTION DMM

MODEL MS8209

Unique combination hand held. Offers not only most often used DMM features but also 4 major environmental testing measurement functions.

- Designed to combine the functions of a Sound Level Meter, Light Meter, Humidity Meter, Temperature Meter and Digital Multimeter
- Traditional DMM functions
- AC/DC Voltage and Cur-rent, Resistance, Frequency, Duty Cycle, Capaci-tance, Continuity, Relative Measuring & Diode Check
- Bright, blue back-light with convenient Auto-Off
- Auto and Manual ranging
- 14 different functions, 39 ranges
- Data hold, auto power off, overload protection, low battery indicator
- Comes complete with high quality test leads, battery, thermocouple, operator manual plus spacious, high quality / rugged carry and storage case
- Overrange protection for all ranges
- DCV: 400mV, 4V, 40V, 400V, 600V ranges
- ACV: 4V, 40V, 400V, 600V ranges
- AC/DC Current: 40mA, 400mA, 10A ranges
- Resistance: 400 ohm, 4K, 40K, 400K, 40M ranges
- Capacitance: 6 ranges to 200 F range
- Frequency: To 200KHz, 7 ranges
- Duty Cycle: 0.1 ~ 99.9% range. 0.1% resolution
- Temperature: –20 C ~ 1,000 C, 6 ranges
- Humidity (RH): 30 ~ 90% range, 0.1% resolution
- Sound Level: 35 ~ 100dB, 0.1dB resolution
- Illuminance (Lux): 4,000 and 40,000 Lux ranges

Part No. 01MS8209 • Price $56.95

BK PRECISION TEST BENCH DMM

IN RUBBERIZED CASE – MODEL 388B

High performance and value priced, this Test Bench® Model 388B offers more features for the dollar than other multimeters. This meter has a dual injection molded case that allows a better grip and offers better meter protection.
CE marked and UL listed.

- 3 3/4, 4000 count LCD display
- 0.5% basic accuracy
- Transistor test (hFE)
- Auto power off
- All current ranges are fused protected
- Designed to meet IEC61010 1, CATIII 600V, class2

MODEL 388BKIT – Test Lead Set Included

This kit is ideal for general purpose electronic and electrical trouble shooting or repair. Kit contains flexible pincer and alligator clips for larger components and miniature hook clips for smaller ones.

Included Test Lead Accessories:

- 1.5 Meter Long Silicone 4mm Sheathed Straight to Right-Angle Plug Lead Set.
- Flexible Pincer Set – Red & Black.
- Alligator Clip Set – Red & Black.
- Probe Body Set With 2mm (.080") Diameter Tips.
- Hook Test Clip to 4mm Banana Jack.
- Tri-Fold Nylon Pouch

Part No.	Description	Price
01DM388B	DMM	$139.00
01DM388BKIT	DMM With Test lead Set	195.00

RSR DIGITAL MULTIMETER

Model 86B Autoranging with USB

- Large 3 3/4 digits with USB interface
- Measures DC/AC Volts, Resistance, DC/AC Current, Capacitance, Frequency, Temperature (Probes Included), Continuity Beeper, Diode Checker.
- FEATURES: Data hold, Autopower off, Bar Graph Display
- DC Voltage: 400mv — 1000V (0.5%)
- AC Voltage: 400mv — 750V (0.8%)
- DC Current: 400 μA — 10 A (1.0%)
- AC Current: 400 μA — 10 A (1.5%)
- Resistance: 400 Ω — 40 MΩ (0.8%)
- Capacitance: 4ηf — 100μf (0.5%)
- Frequency: 4Hz — 30 MHz (1.0%)
- Temperature: -20 — 1000 C (1.0%)
- Size and weight: 7.5" x 3.7" x 1.9"; 1lb

Part No.	Description	Price
01V86B	Digital Multimeter Autoranging with USB & Downloadable Software	$44.95

RSR SMD TESTER FOR RESISTORS & CAPACITORS

Model MS8910

This digital tweezer/tester makes it easy to test tiny surface mount resistors and capacitors. Precise tips made of non-magnetic steel are able to pick and test even the smallest SMD components. It can also test regular components where leads may be too short to insert into test terminals.

- Auto power off
- Low battery indicator
- Built-in high-precision R/C probe
- Ideal for Surface Mount Devices
- Weight: 5.0 oz.

Part No.	Description	Price
01DMMS8910	Digital Tweezer Tester for resistance and capacitance	$29.95

EXTECH WIRELESS MULTIMETER

MODEL EX540

- Wireless data-streaming up to 30 feet
- True RMS; 40,000 count
- Frequency and temperature measurements
- Waterproof IP67 rating
- 4-20mA loop test
- **DC/AC Voltage:** .01mV to 1000V
- **DC/AC Current:** .01 A to 10A
- **Capacitance Range:** 40nf to 40mf
- **Frequency Range:** .01Hz–100MHz
- **Temperature Range:** –58 F to 1382 F

Part No. 01EX540 • Price: $299.99

RSR DIGITAL MULTIMETER+ CAPACITANCE + INDUCTANCE METER

MODEL DM1007

This meter offers all the features of an LCR meter and digital multimeter. Features include capacitance, inductance, hfe, audible continuity tester and extra large LCD display. Comes with carrying case, battery and spare fuse.

SPECIFICATIONS:

AC/DC Current – To 10 Amp
Resistance – To 2,000 M Ohm
Capacitance – To 200 F
Inductance - 2mH, 20mH, 200mH
2H, 20H 5% accuracy @ 200Hz.
Frequency – 15 MHz

Part No.	Description	Price
01DM1007	DM1007	$49.95
05CLS77	Capacitor Adaptor Probes	4.90
05TLS77	Transistor Adaptor Probes	4.90
01DM926-H	Holster	5.25
01CC-LARGE	Carrying Zipper Case	2.95

FLUKE TRUE-RMS INDUSTRIAL LOGGING MULTIMETER WITH TRENDCAPTURE

MODEL 289

- Large 50,000 count, 1/4 VGA display with white backlight for fast, accurate viewing of measurements
- Logging Function with TrendCapture plots measurements as a single line to help detect anomalies over time, storing up to 10,000 readings. Using on-board TrendCapture, you can graphically view logged readings on the meter
- "i" button Unsure about a measurement function? Select it, then press the "i" button for instant access to on-board help screens
- Log multiple sessions or log data continuously for over 200 hours
- Soft keys and scroll buttons for easy navigation control, access to secondary functions. Create custom displays too
- Saved measurements for naming and recalling measurements made in the field
- Field upgradeable and expandable meter lets you stay current as new capabilities are added
- Events and trends recording Helpful for troubleshooting intermittent problems or profiling loads

Fluke-289/IMSK Industrial Multimeter Service Kit includes:

- Fluke-289V Advanced data logging Multimeter
- Fluke-i400 AC 400A Current Clamp
  - Measure up to 400 A AC
  - 1mA/Amp output
  - CAT IV 600 V / CAT III 1000 V safety rating
- TL71 Silicone Test Leads
- AC72 Alligator Clips

Part No.	Description	Price
01DMFL289	Model 289 Meter	$590.00
01DMFL289IMSK	Meter With Service Kit	639.00

AMPROBE® DIGITAL MULTIMETERS

MODELS 5XP, 15XP, 35XP

XP series are compact, full featured with two unique extras: non contact AC line voltage detection, magnetic grip holster.

35XP

- 5 ranges to 1000V dc, 750V ac
- AC/DC Current ranges to 200mA ***(5XP)*** to 2A ***(15XP, 35XP)***
- Counts 2000 ***(5XP, 15XP)*** and 4000 ***(35XP)***
- Continuity beeper and overload protection
- Logic Test 20MHz ***(15XP only)***

Model 35XP Features Only

- Capacitance 4,000 F, auto power off
- Frequency 1MHz, Temperature 1000 C

Part No.	Description	Price
01AMP5XP-A	5XP Model	$52.95
01DM15XP	15XP Model	65.00
01DM35XP	35XP Model	94.00

AMPROBE® PROFESSIONAL FIELD SERVICE DMM

MODEL 33XR

Offers measurement functions needed for maintenance, repair and installation of electrical, HVAC and electro-mechanical equipment. Includes Magne-Grip Holster with magnetic hanging strap freeing both hands. Includes heavy duty test leads with threaded alligator clips, K thermocouple.

- Manual ranging, 4000 count DMM
- Capacitance to 4,000 F
- Frequency to 40 MHz
- Temperature: 1832 F / 1000 C
- DC voltage to 1,000V AC voltage to 750V
- AC/DC current to 10A
- mV AD/DC, auto-off, analog bar graph display, min/max, relative mode, data and peak hold, low battery indicator.

Part No.	Description	Price
01DM33XR	Manual Ranging Field Service DMM	$92.00

AMPROBE® COMPACT DMM

MODEL DM7, AM-510

AM-510

DM7

- Autoranging ***(DM9, AM-510)***
- Battery Test ***(DM7, AM-510)***;
- DC/AC Voltage: 600V ***(DM7, AM-510)***
- Resistance: 2M ***(DM7)***; 40M ***(AM-510)***
- Counts: 2,000 ***(DM7)***; 4,000 ***(AM-510)***

Part No.	Description	Price
01DM7	Model DM7	$46.00
01AM510	Model AM-510	37.65

AMPROBE® TRUE RMS DMM

WITH COMPONENT AND LOGIC TEST

MODELS 34XR, 37XR, 38XR

34XR

37XR

38XR

- DCV: 1000V — .5% (***34XR)***; .1% ***(37XR)***; .25% ***(38XR)***
- ACV: 750V rms
- DC/AC Current: 10A/10A rms
- Resistance: 40MΩ
- Auto power off, analog bar graph
- Capacitance: 4,000 f (***34XR)***; 400 f ***(37XR, 38XR)***
- Frequency: 1MHz ***(34XR)***; 10MHz ***(37X, 38XR)***
- Temperature: 1000 C ***(34XR);*** 1300 C ***(38XR)***
- Inductance: 40H ***(37XR)***
- Counts: 4,000 (34XR); 10,000 ***(37XR, 38XR)***
- RS232: 38XR only (software optional)
- 3 year warranty

Part No.	Description	Price
01DM34XR	34XR – True RMS DMM	$105.00
01DM37XR	37XR – True RMS DMM	$135.00
01DM38XR	38XR – True RMS DMM	165.00
0138-SW	RS232 Cable & Software	33.95

AMPROBE® BASIC DMM

WITH NON-CONTACT VOLTAGE TESTER

MODEL 30XR

This has all basic functions for automotive, residential and education applications

- 9 functions, 30 ranges
- 600V DC, 10A range
- Continuity and diode check
- Battery tester

Part No. 01DM30XR • Price: $72.95

AMPROBE® PEN-STYLE DMM

MODEL DM73B

Convenient one-hand operation for tight spot applications.
Probe Hold™ function, automatically captures and holds reading for reference later. Plug in test lead and battery included.

- 3 3/4 digit, 4200 count
- Autoranging, Probe Hold™
- Continuity test with beeper
- Simple one-handed operation
- AC/DC to 600V. Resistance to 34M
- Auto off
- Optional Accessories – Alligator clip lead, case

Part No.	Description	Price
01DM73	Pen-Style DMM	$58.00
01VC11	Soft Case For DM73	4.90
01TL73	Insulated Alligator Lead For DM73	8.90

BK PRECISION TOOL KIT DMM 0.5%

MODEL 2703C
MODEL 2704C – W/CAP
MODEL 2704CKIT
MODEL 2706B – W/TEMP
MODEL 2707B – MULTI FUNCTION

Excellent meters for most jobs that require flexibility, accuracy and speed. Value packed features make these meters a must in every "Tool Kit®".

- 2000 count
- 0.5% DCV accuracy
- DC voltage to 1000V
- AC voltage to 750V
- DC current to 10A
- AC current to 10A ***(Models 2704C, 2706B, 2707B)***
- Resistance to 20M ohm
- Capacitance to 20uF ***(Models 2704C, 2706B, 2707B)***
- Frequency counter ***(Models 2706B, 2707B)***
- Transistor test ***(Models 2704C, 2706B, 2707B)***
- Temperature ***(Model 2706B)***
- Continuity
- Diode test
- Logic Probe ***(Model 2707B)***
- Protective rubber boot included

2704BKIT

- Model 2407B meter, ***plus:***
- 1.5 meter long silicone 4mm sheathed straight to right angle plug lead set
- Alligator clip set – red and black

Part No.	Description	Price
01BK2703	Model 2703C	$46.00
01BK2704	Model 2704C – W/Cap	66.00
01BK2704CKIT	Model 2704C W/Extra Accessories	89.00
01BK2706	Model 2706B – W/Temp	86.00
01BK2707	Model 2707B – Multi function	95.00

BK PRECISION DIGITAL MULTIMETER

SURVIVOR® SERIES

MODEL 2860A

- Heavy duty 1500 VDC rating
- Rugged construction
- Includes rubber boot
- Withstands 5-foot drop
- Extra large, high contrast LCD display
- Gasket sealed against dirt and contaminants
- Water resistant
- High energy fused on all current ranges
- Auto power off saves batteries
- Built in probe holders
- Non-slip grip
- Extensive overload protection
- 0.5% DCV accuracy
- Manual ranging
- 3 1/2 digit, 2000 count
- Large 0.8" LCD display

Part No. 01DM2860A • Price: $105.00

RSR

DIGITAL MULTIMETER
WITH HUMIDITY, TEMPERATURE, LUX, SOUND SENSORS / AUTORANGING
FIVE-IN-ONE W/MULTI-SENSOR INPUT

Key Specifications/ Special Features

- **LED Warning when incorrect** banana jacks are used relative to function switch setting (volt, amp, resistance)
- Data hold and LCD backlit
- Auto/manual ranging, auto power off
- Safety as per IEC1010-1 Cat. III 600V and Cat. 1000V

Technical Specifications:

- DCV: 200m/2/20/200/1000V, 0.7%
- ACV: 200m/2/20/200/750V, 0.8%
- DCA: 200 /2m/20m/200m/2/10A, 1.2%
- ACA: 200 /2m/20m/200m/2/10A, 1.5%
- Capacitance
- Ohm 200/2K/20K/200K/2M/20M, 1.0%
- Temperature: –20 - 1000 C (0–1,800 F) 3.0%
- RH: 20–95%, 5.0%
- Lux: 2,000/20,000 Lux, 5.0%
- Sound: dB: 40 – 100dB, 5.0dB
- Dimensions and Weight: 195 x 92 x 55mm, 400g
- Battery: 1.5 x 3 AAA size (*Batteries not included)*

Part No. 01DMMS8229 • Price: $75.95

RSR

DIGITAL MULTIMETER – AUTORANGING

Features:

- 3 3/4 digits LCD display
- **LED / Sound Warning when incorrect** banana jacks are used relative to function switch setting (volt, amp, resistance)
- Data hold and LCD back lit
- Manual ranging and autorange mode
- Safety as per IEC1010-1 Cat. II 600V and Cat. 1000V Cat. II

Technical Specifications:

- DCV: 400mV – 1000V, 5 ranges
- ACV: 400mV – 750V, 5 ranges
- Resistance: 400-40M, 6 ranges
- DC and AC Current: 400 – 10A, 5 ranges
- Capacitance: 4n – 200 , 6 ranges
- Frequency: to 200KHz
- Resettable fuse inside
- Diode and transister test, audible continuity
- Dimension and Weight: 195 x 92 x 55mm; 400g
- Battery: 15.V AAA

Part No. 01DMMS8268 • Price: $33.95

EXTECH COMPACT MULTIMETERS

MODELS EX310, EX320, EX330

EX310 EX320, EX330

Built-in non-contact AC Voltage Detector (100 to 600V AC). Auto ***(EX320, EX330)*** or manual ranging ***(EX310)***.

- Count: 2,000 ***(EX310, EX320)***, 4,000 ***(EX330)***
- DC/AC Volts: .1mV to 600V
- DC/AC Current: .1mA to 10A ***(EX310)***; .1 A to 10A ***(EX320, EX330)***
- Resistance: 2M ***(EX310)***; 20M ***(EX320)***; 40M ***(EX330)***
- Capacitance: .001nf to 200 F ***(EX330 only)***
- Frequency: 10MHz ***(EX330 only)***
- Temperature: –4 to 1,382 F ***(EX330 only)***
- Dimensions/Wt.: 5.7" x 2.9" x 1.6" / 9 oz.

Part No.	Model	Price
01EX310	Model EX310	$39.99
01EX320	Model EX320	49.99
01EX330	Model EX330	59.99

EXTECH POCKET, MINI MULTIMETERS

Autoranging (MN36, DM110) or manual MN35). Large easy to read digital display.

MN35 MN36 DM110

- **DC Volts:** 600V ***(MN35, MN36)***, 500V ***(DM110)***
- **AC Volts:** 600V ***(MN35, MN36)***, 500V ***(DM110)***
- **DC Current:** 10A ***(MN35, MN36)***, 400mA ***(DM110)***
- **Resistance:** 20M ***(MN35)***, 40M ***(MN35, DM110)***
- **Capacitance:** 100 f ***(MN36, DM110)***
- **Frequency:** 5MHz ***(MN36)***, 10MHz ***(DM110)***

Part No.	Model	Price
01MN35	MN35	$19.99
01MN36	MN36	39.99
01DM110	DM110	39.99

EXTECH LCR METER WITH PC INTERFACE

Measures inductance, capacitance and resistance with secondary parameters (Q, D, R).

- Set Hi/Lo limits using absolute value or % limits
- Parallel or series equivalent circuit
- Max/Min/Avg recording
- Open and short zero removes unwanted stray impedances
- Built-in RS-232 with Windows® software
- Complete with test leads, alligator clips, 9V battery and holster and cable

Part No.	Description	Price
01EX380193	380193 LCR Unit	$208.95

EXTECH PROFESSIONAL MULTIMETERS

MODELS EX411, EX430, EX470

EX411 EX430 EX470

Affordable true RMS, with built in infra red thermometer ***(EX470)***

- **Count:** 4,000 ***(EX430, EX470)***; 2,000 ***(EX411)***
- **DC/AC Volts:** 1,000V (DC); 750V (AC)
- **DC/AC Current:** 0.1 A to 20A
- **Resistance:** 40M ***(EX430, EX470)***; 20M ***(EX411)***
- **Frequency:** 10MHz ***(EX430, EX470)***
- **Capacitance:** .01nf to 100 f
- **Temperature Infrared:** –58 to 518 F
- **Temperature:** –4 to 1382 F
- **Dimensions/Wt.:** 7.4" x 3.2" x 2" / 0.75 lb.

Part No.	Model	Price
01EX411	Model EX411	$74.99
01EX430	Model EX430	94.99
01EX470	Model EX470	149.99

FLUKE DIGITAL MULTIMETER WITH REMOTE DISPLAY

Model 233 with Removable Display

The Fluke 233 allows you to be in two places at once. Enables measurements in hard–to–reach areas, clean rooms and hazardous areas.

- Wireless technology
- Locate display up to 30 ft. from point of measurement
- True-RMS AC volts and current
- Built in thermometer, Capacitance, Frequency & Min/Max, in addition to all standard DMM functions
- Magnetic remote display for convenience in mounting
- Auto-off
- Low power wireless transmission does not interfere with accuracy
- Operates as a conventional meter when display is connected

Part No.	Description	Price
01DMFL233	Fluke Model 233 with remote display	$299.00

FLUKE 80 SERIES V TRUE RMS DIGITAL MULTIMETER

MODELS 83-5, 87-5

- Fluke's 80 Series V DMMs provide 11 functions for electronic and industrial applications including:
  - — DC/AC voltage up to 1000V
  - — DC/AC current up to 10A (all fused)
  - — Frequency and duty cycle up to 199.99 KHz
  - — Resistance 400.00Ω – 40.00MΩ
  - — Conductance 40nS
  - — Continuity
  - — Diode test
  - — Capacitance 5.00nF – 5.00 F
- Peak min/max recording mode (250 s for ***Model 87-5***, 100 s for ***Model 83-5***) stores the highest, lowest and 36-hour average of all readings.
- 4 1/2 digit mode 20,000 count display ***(Model 87-5)***
- Input alert provides an audible warning if the test leads are in current, but the function is not.
- All inputs are protected to IEC 1010-1 cat. III 1000V.
- Holster Included

All meters have been independently tested and approved for UL3111, CSA C22.2 No. 1010 and TuV to EN61010.

Part No.	Description	Price
01DMFL83-5	Meter 83V with Test Leads	$375.95
01DMFL87-5	Meter 87V with Test Leads	375.00

FLUKE MULTIMETERS

MODELS 114, 115, 116, 117

GENERAL FEATURES

- Autoranging
- AC/DC voltage 1mV to 600V
- 0.7% accuracy, MIN/MAX Avg
- **Resistance:** 0.1 ohm to 40M
- **Capacitance:** 1nF to 10,000 F
- **Frequency:** 5Hz to 50KHz
- Protective rubber holster included
- Continuity beeper and diode testing function
- True RMS AC voltage and current ***(115, 116, 117)***
- AC/DC current to 10 amps ***(115, 116, 117)***
- Backlight display for low light environments ***(114, 115, 116, 117)***
- Test leads and user manual included
- 3 year warranty

Technician Combo Kit (DM116/62) – includes DM116 meter, infrared thermometer Fluke 62, hard point test lead set, tool pak magnetic hanging strap, deluxe case w/shoulder strap, integrated temperature probe and thermocouple adapter.

Electrician Combo Kit (DM117/323) – Includes DM117 meter, compact clamp meter Fluke 323, magnetic hanging strap, deluxe soft case w/shoulder strap and hard point test lead set.

Part No.	Description	Price
01DMFL114	Fluke Model 114	$139.00
01DMFL115	Fluke Model 115	159.00
01DMFL116	Fluke Model 116	169.00
01DMFL117	Fluke Model 117	189.00
01DM11662	Combo Kit (Technician)	249.00
01DMFL117323	Combo Kit (Electrician)	324.95

FLUKE VOLTAGE CONTINUITY AND CURRENT TESTER

MODELS T5-600 AND T5-1000

Fluke T5 electrical testers let you check voltage, continuity and current with one compact tool. With the T5 all you have to do is select volts, ohms, or current and the tester does the rest. Tough test leads stow neatly in the back of the tester.

- OpenJaw™ current lets you check current up to 100A AC without breaking the circuit.
- Measures volts AC or volts DC
  - — T5-1000 – up to 1000V
  - — T5-600 – up to 600V
- Displays resistance to 1000Ω
- Continuity beeper.
- Rugged enough to withstand a 10 foot drop.
- Auto off mode to conserve the energy.
- T5-600 protected to CATIII-600V
  T5-1000 protected to CATIII-1000V

Part No.	Price
01DMFLT5-600	$112.00
01DMFLT5-1000	145.00

FLUKE 170 SERIES

6,000 COUNT, 3 3/4 DIGIT, TRUE RMS DMM'S

MODELS 175 , 177, 179

- Meets IEC 1010 CAT IV 600V / CAT III 1000V safety rating
- True RMS AC voltage and current, back-lit display
- 63 segment bar graph, auto/manual ranging, auto/manual hold, min/max, avg
- Capacitance: 100mf, 10 f, 100 f, 9999 f
- **AC/DC Volts:** 600mV, 6V, 60V, 600V, 1000V
- **AC/DC Current:** 60mA, 600mA, 6A, 10A
- **Frequency:** 100 Hz, 1KHz, 10KHz, 100KHz
- **Temperature:** ***(Model 179 Only)*** –40 F ~ 752 F
- Rugged, over-molded, tapered case

Part No.	Description	Price
01DMFL175	.15% Accuracy	$295.00
01DMFL177	.09% Accuracy	275.00
01DMFL179	.09% Accuracy & Temp.	295.00
01DMFL179EDA	Meter 179 with Deluxe Accessories and Case	349.00

FLUKE SUREGRIP™ INDUSTRIAL TEST LEAD SET

MODEL TL220

- AC220 SureGrip™ Alligator Clip Set
- TP220 SureGrip™ Test Probe Set
- TL222 SureGrip™ Silicone Test Lead Set (right to right)
- One year warranty

Part No. 01TLF220 • Price: $69.95

FLUKE MODEL 77-IV

- **DC/AC Voltage:** 1000V
- **DC/AC Current:** 10A
- Autoranging and manual ranging
- Resistance and continuity
- Frequency and capacitance
- Meets Measurement Category 1000 V CAT III and Cateogry IV 600 V safety standards

Part No. 01DMFL77-4 • Price: $285.00

BK PRECISION TRUE RMS BENCH DIGITAL MULTIMETER

4 1/2 DIGIT – MODEL 2831E

The Model 2831E provides versality and reliability for a broad spectrum of laboratory and service applications. Being a true multimeter, it can make diode, frequency and continuity measurements in addition to basic current, voltage and resistance measurements.

- True RMS for accurate interpretation of any waveform signal
- 4 1/2 digit LED display for clear reading in darkest environment
- Great overload protection on all ranges
- Voltage measurements up to 1200VDC and 1000VAC
- Current measurements up to 20A AC/DC
- Basic accuracy for DCV is 0.03%
- USB Interface

DC Voltage		**AC Current**	
Max Range	1200V	Max Range	20A
Best Accuracy	+0.03%+5D	Best Accuracy	+0.75+5d
Best Resolution	100 V	Best Resolution	100nA
AC Voltage		**Resistance**	
Max Range	1000V	Max Range	20MΩ
Best Accuracy	+0.75%+10d	Best Accuracy	+0.2%+5d
Best Resolution	100 V	Best Resolution	0.1 ohm
DC Current		**Frequency**	
Max Range	20A	Max Range	200KHz
Best Accuracy	+0.75+5d	Best Accuracy	+1.0%+5d
Best Resolution	100nA	Best Resolution	1Hz

Part No. 01DM2831 • Price: $305.00

RSR BENCH DMM – HIGH ACCURACY AUTO-CALIBRATING, RS232, GRAPHIC SOFTWARE

MODEL MS8050

The MS8050 is a multi-feature instrument with a dual 5 digit display and 53,000 count measurement for high accuracy and stability. Ten different measurement functions make this model a powerful, versatile performer. With a 30 full screen memory function for saving test data, and display/draw/record software for all test processes, an extremely wide range of applications exist for the MS8050. Its exclusive dynamic scale, which can detect very small changes of parameters, along with its computer interface capabilities, make it ideal for use as a recorder. Safety protection against operator error also makes it perfect for university labs, school technology, industry and research and development.

- AC/DCV + ACV: Six ranges to 1000V
- AC/DC Current + AC Current: Six ranges to 10A
- Capacitance: Six ranges to 5000 F
- Resistance: Six ranges to 50M
- Logic Frequency: 5Hz ~ 2MHz
- Linear Frequency: 10Hz ~ 2MHz
- Duty Cycle: 5Hz ~ 500KHz
- RS-232 interface and software
- Software calibrates automatically
- Auto/Manual ranging, diode test, full screen memory function, data hold, full overload protection, min/max, relative and average measurement, DC accuracy to 0.03%, 110V or 220V power operation

Part No. 01DMMS8050 • Price: $375.00

GW INSTEK BENCH-TOP, DUAL DISPLAY DMM'S

WITH USB, RS-232 AND 9 PIN I/O INTERFACE

MODEL GDM-8255A 199999 COUNT
MODEL GDM-8251A 120000 COUNT

Extensive measurement functions (ACV, DCV, ACA, DCA, R, Hz, continuity beeper, diose test, REL, MIN/MAX, hold, relative value, compare, temperature and more. True RMS (AC, AC + DC).

- Selectable Measurement Rate
- Frequency Measurement
- Math, Store, Recall, dB
- Included as standard are USB, RS-232 and 9-pin digital I/O interface.
- Factory installed GPIB model versions available

Part No.	Description	Price
01GDM8251	12000 count bench DMM with USB	**$610.00**
01GDM8255	19999 count bench DMM with USB	**710.00**
01GDM8251GPIB	12000 count with GPIB interface	**745.00**
01GDM8255GPIB	19999 count with GPIB interface	**745.00**

BENCH DIGITAL MULTIMETER

TRUE RMS, USB & RS232 MODEL DM422B

- 4 digit, 40,000 count, true RMS AC
- Built-in USB & RS232 interfaces
- Data save and recall with software
- Triple display (main, sub-left, sub-right)
- 40 segment bar graph display, duty cycle
- Temperature function, 0.025% DC accuracy
- Frequency, period, capacitance, continuity
- 1,000V AC & DC. 10A AC & DC.

Part No. 01DM422B • Price: $325.00

VIZATEK BENCH DMM WITH FUNCTION GENERATOR

Model DMVC8145

Bench Digital Mulitmeter with waveform generator and thermometer
- Large LCD, High contrast, Wide visual angle LCD display, white backlight
- Dual- display:Main display 80000, Secondary display 80000,analog bar 21 sect.,with unit & function symbols
- 50 measurement functions Including DCV, ACV, DCA, ACA, Ohm, CAP, Hz, TEMP, Diode, Continuity and others
- Frequency range up to 80MHz
- Standard function generator: 18 waveforms,1% to 99% Duty cycle, 1800 pcs wave output
- Resistance measurement range: 0.01 Ohm - 80 MOhm
- Capacitance measurement range: 10PF - 100uF
- Temperature measurement Range: -58^{O}F to 2502^{O}F, - 50^{O}C to 1372^{O}C
- Photoelectric isolated RS-232 computer interface
- AC measurement - High accuracy RMS,Wide measurement AC+DC function.
- Auto data refresh hold

Part No.	Description	Price
01DMVC8145	Digital Multimeter with with Function Generator	$195.00

RSR BENCH DMM

Best Value!

TRUE RMS, LCD

MODEL DM9803R (W/RS232)

- 3 3/4 (3999) count) large LCD display with back light.
- Bar graph display – 42 segment
- Auto and manual range
- True RMS for AC voltage/current
- RS232C standard interface – software included.
- Data hold, min/max relative measuring, storage data display/recall, continuity and diode test
- DC Volts – 1,000 VDC 5 ranges, .3% accuracy.
- AC Volts – True RMS, 750VAC 4 ranges.
- AC (true RMS)/DC Current – 10 amp 4 ranges.
- Resistance – 40M 6 ranges.
- Capacitance – 40 F 5 ranges.
- Frequency counter up to 600KHz, accuracy 0.1% Sensitivity: 100mV up to 20KHz, 500mV 20-600KHz
- Adapted range: Display 10 counts per 1mV DC
- Optional Power Feature – Runs on AC or DC (either one 9V or 6 AA batteries). Batteries not included.
- Pop-up stand and carry strap.

Part No.	Description	Price
01DMM9803R	Bench DMM With RS232 Interface	$139.95

INSTEK

BENCH STYLE DMM'S WITH USB

MODELS GDM8341, GDM8342, GDM8342GP

The basic difference between Model GDM8341 & Model GDM8342 is that the 8342 provides storage for data collection on a flash drive, a temperature function and it may also be equipped with a factory installed GPIB interface. Models offer computer connectivity via USB interface. All other specs are common to all instruments

Features:
- 50,000 COUNT 0.02% dcv accuracy
- Dual display measurement
- Three selectable measurement speeds
- Auto/Manual ranging, true RMS
- Min/Max, Rel/Rel#, MX+B, 1/X, Ref%, compare, hold, dB, dBM
- Free software - remote control, data retrieve
- Capacitance- 7 ranges to 50uF
- Frequency- 3 ranges to 1Mhz
- 11 different measurement functions
- Data storage collection & temperature functions (Model GDM8342 & 8342GP)

Part No.	Description	Price
01GDM8341	USB bench meter	$339.00
01GDM8342	USB bench meter	$450.00
01GDM8342GP	Advanced bench meter with GPIB interface	$520.00

SIGLENT

SIGLENT TECHNOLOGIES

BENCH MULTIMETER

MODEL SDM3055/SDM3055A

The new Siglent SDM3055/3055A is a new 5 digit dual-display digital multimeter and features many math and statistical functions It includes a variety of communication interfaces with easy setup, is equipped with a 4.3-inch TFT-LCD screen, and is designed for users who needs include high performance, multiple functions, and automatic measurements, is a high performance desktop multimeter.

Features:
- Up to150rdgs / s measurement speed
- 1Gb NAND Flash, supports U disk expansion
- Built-in thermocouple cold-junction compensation
- Supports remote control commands provided PC software
- Extensive math functions which include measuring the signal's minimum / maximum / average / standard deviation. Also readings can be displayed in dBm, dB, Pass / Fail, relative value, histograms, trendcurves, bar graphs, etc

Part No.	Description	Price
01SDM3055	5 1/2 Digit; USB/LAN	$449.00
01SDM3055A	5 1/2 Digit; USB/LAN/GPIB	$619.00

BENCH DIGITAL MULTIMETERS

GW INSTEK MILLI-OHM METERS

MODEL GOM-801H

Designed to measure low resistance such as contact resistance of switches, relays, plugs, connectors, or between electrolytic's lead/electrode.

Model GOM-801H

- Measures from 20 milli-ohm to 20k in 7 ranges
- Test current: 10uA ~ 1A
- High resolution 10 ohm
- Buzzer indicates GO/NOGO result without having to view display
- Hi/Lo comparator indicator
- 3 digit 0.5" LED display
- Complete with power cord, test lead and manual. Approx. 4.5 lb.

MODEL GOM-802

This model offers more advanced features, additional functions, options and higher accuracy

Model GOM-802

- 30000 count display. 9 Ranges 30 milli-ohm to 3M
- High accuracy 0.05%
- Hi/Lo comparator and limit percent setting
- Measurement of REL, actual and % value
- Manual or autoranging
- Continuous or triggered measurement mode
- Temperature compensation and measurement
- Four- terminal measurement technique
- Auto-recall last setting after Power OFF and ON again
- Alarm setting for Pass/Fail
- Scan, handler interface (standard)
- Factory installed RS232/GPIB interface model available for additional cost (Model 802G)
- Complete with power cord, test lead and manual. Approx. 4.5 lb.

Part No.	Description	Price
01GOM801H	Milli-Ohm Meter	$340.00
01GOM802	Mill-Ohm Meter/Enhanced Features	510.00
01GOM802G	GPIB/RS232 Interface Model	860.00
01PT100	Opt. Temp Probe for 802 Models	120.00

GW INSTEK ELECTRICAL SAFETY TESTERS

MODEL GPT-9801,
AC MODEL GPT-9802
AC+DC MODEL GPT-9803
AC+DC+IR MODEL GPT-9804
AC+DC+IR+GB

- High Efficiency and High Stability Output PW amplifier design. Output source up to 98% efficiency. Less than 1% regulation
- High Accuracy and High Resolution Testing. 2V adjustable steps. Current measurement done with 1uA resolution and +/-(1.5% + 30uA) accuracy enables small leakage measurements
- Constant protection function in operation throughout testing. Self-check when power turned on, then "detection voltage" sent during initialization period checks for shorts to prevent high voltage or current returning during test. Additional cut-off protection mechanisms
- LCD display clearly shows setting parameters, test conditions, measurement values and DUT inspection results
- Manual or auto test mode, function key for quick selecting, True RMS, 100 memory block for test condition (step) settings, USB device and RS232 interface. GPIB optional

Optional accessories available include GPID card, High Voltage Test Pistol, High Voltage Test Probe, USB, RS232 or GPIB cable, rack adapter panel

Part No	Description	Price
01GPT9801	AC 200VA (AC)	$1,015.20
01GPT9802	AC 200VA (AC+DC)	1,170.00
01GPT9803	AC 200VA (AC+DC+IR)	1,425.60
01GPT9804	AC 200VA (AC+DC+IR+GB)	2,138.00

FLUKE BENCH TYPE DMM

MODEL 8845 – 6.5 Digit Precision
MODEL 8846 – 6.5 Digit Precision USB Memory

These multimeters have the precision and versatility to handle your most demanding measurements, on the bench or in a system. A multifunction DMM including measuring volts, ohm and amps, basic Vdc accuracy of up to 0.0024%, 10 amp current range and a wide ohm range from 10 ohms to 1 G ohms. The meters feature graphical display modes, including Trendplot™ paperless recorder mode, statistics and histograms.

SPECIFICATIONS

VDC: 100mV to 1000V
VAC:
100mV to 750V (***Model 8845)***
100mV to 1000V (***Model 8846)***
DC Current: 100 A to 10A
AC Current: 100mA to 10A
Resistance:
100Ω to 100MΩ (***Model 8845)***
10Ω to 1GΩ (***Model 8846)***
Capacitance: 1nF to 0.1F (***Model 8846)***
Frequency:
3Hz to 300KHz (***Model 8845)***
3HZ to 1MHz (***Model 8846)***
Continuity / Diode Test *Both Models*
Temperature: –200 C to +600 C (***Model 8846)***
USB Memory / Real time Clock (***Model 8846)***

Part No	Description	Price
01FL8845	Model 8845	$1,045.00
01FL8846	Model 8846 w/USB Memory	1,490.00

BK PRECISION LCR IN-CIRCUIT SYNTHESIZED METER

MODEL 889B

The B&K Precision Model 889 Synthesized In-Circuit LCR/ESR Meter is a high accuracy test instrument used for measuring inductors, capacitors and resistors with a basic accuracy of 0.1%. Also, with the built-in functions of DC/AC Voltage measurements and Diode/Audible Continuity checks, the Model 889 can not only help engineers and students to understand the characteristic of electronics components but also being an essential tool on any service bench.

Part No. 01BK889 • Price: $1,475.00

UNI

BENCH DIGITAL MULTIMETER

80,000 COUNT
MODEL: DM1150B

Features:
- Large dual-display LCD with analog bar graph
- 50 measurement functions including cap. freq. and temp.
- Simultaneous measurement: AC+DC, AC+Hz, DC+dBm
- RS-232 interface, auto data update, data hold
- Input: 115 VAC or 23 VAC @ 48-60Hz
- Size: 10.2" x 8.7" x 3.2"; wt. 3.1 lbs.

Part No. 01DM1150 • Price: $346.95

INSTEK

6 1/2 DIGIT DUAL MEASUREMENT MULTIMETER

BENCH METER GDM-8261

High precision 6 digit bench DMM with dual measurement displays. 11 high accuracy measurement and 10 math functions (35ppm DC voltage accuracy). Optional scanner card carries 16 V-Channels and 2 I-Channels to facilitate measurements of multiple test points. Can be used as semi-auto ATE system or as data logger to perform long term monitoring. LabVIEW driver supported. Unlike most "dual display" meters (which show test result on primary display and range info on secondary), The GDM-8261 performs two complete measurement functions simultaneously and displays the test results on the primary display and secondary display respectively.

- 0.0035% DCV basic accuracy
- Exceptionally high resolution – up to 100pA with DCI & 1nA with ACI
- 2 /4 wire resistance measurement
- Four math operations
- Temperature – from –200`C ~ +1820`C
- Store / recall from 2 ~ 9,999 readings
- USB and RS232 interfaces standard
- Optional scanner card (field installable) and free software

Part No.	Description	Price
01GDM8261	1,200,000 Count DMM	**$339.00**
01SC18261	Scanner Card	**469.00**
01GPIB8261	GPIB Interface	**695.00**
01LAN8261	LAN Interface	**840.00**

RIGOL

DIGITAL MULTIMETER

TRUE 5 1/2, 6 1/2 RESOLUTION

USB / GPIB / LXI

- True 5 digits resolution (240,000-count)
- 120 rdgs/s maximum sample rate
- Up to 0.015% accuracy of DC Voltage per year
- Command compatibility – Replace mainstream DMM randomly via the compatibility of their command
- Patented Any Sensor test capability
- 256 64 pixels LCD display, to support multidisplay and screen menu
- Interfaces: USB(Model DM3058E); USB, LXI, GPIB (DM3058, DM3068)

Part No.	Description	Price
01GDM8341	USB bench meter	**$339.00**
01DM3058E	5 1/2 ; USB Only	**$469.00**
01DM3058	5 1/2 ; USB, LXI, GPIB	**695.00**
01DM3068	6 1/2 ; USB, LXI, GPIB	**840.00**

BK PRECISION

BENCH DIGITAL MULTIMETER

5 1/2 DIGITS; DUAL DISPLAY

MODEL 5491B

SPECIFICATIONS

DC Voltage
Maximum Range: 1000V
Best Accuracy: +0.02% + 3 dgts.
Best Resolution: 10mVS

AC Voltage
(True RMS) Freq. 50Hz to 5KHz
Maximum Range: 750V
Best Accuracy: +1.5% + 80 dgts.
Best Resolution: 10mV

DC Current
Maximum Range: 12A
Best Accuracy: +0.2 + 3 dgts.
Best Resolution: 1mA
Freq. 50Hz to 2KHz
Maximum Range: 12A

AC Current
(True RMS, AC Coupled)
Best Accuracy: +1.5 + 30 dgts.
Best Resolution: 1mA

Resistance
Maximum Range: 300MΩ
Best Accuracy: +0.12 + 3 dgts.
Best Resolution: 10mΩ

Frequency
Maximum Range: 120KHz
Best Accuracy: +0.01 + 3 dgts.
Best Resolution: 10mHz

Part No. 01BK5491 • Price: $409.00

BENCH DIGITAL MULTIMETERS

Global Specialties BENCH DIGITAL MULTIMETER

Model Pro-1000

4 1/2 digit LED display. Measures diodes, frequency, current, voltage, resistance, Audible continuity test. True RMS.
• Frequency – two ranges to 200kHz
• Resistance – 5 ranges to 20M
• AC/DC current to 10A
• DCV 4 ranges to 1,000V. ACV 4 ranges to 750V
• .05% basic accuracy
• 110 or 220 input voltage

Part No. 01DMPRO1000 • Price: $319.00

B&K PRECISION BENCH MULITIMETER

5 1/2 DIGIT – MODEL 5492B; 5492B-GPIB

The B&K Precision model 5492B is a versatile 5 -digit, 120,000-count bench multimeter suitable for applications in education, service repair, and manufacturing.
The instrument enhances your productivity with built-in math functions and USB connectivity. Rel, Max/Min, dBm, dB, %, and Hold functions provide educators with a convenient tool to teach basic math concepts. Additionally, the 5492B offers powerful features not commonly found in other 5 - digit DMMs such as advanced triggering, buffer storage operation, and a GPIB interface option.
The 5492B measures volts and amps with great accuracy and stability, with basic VDC accuracy of 0.01%. The meter is also capable of measuring frequency, period, resistance, continuity, and performing diode tests. Readings can be taken at a maximum rate of 57 readings/sec and stored to an internal 512-byte buffer for post acquisition statistical analysis.

Features:
- 5 -digit, 120,000-count display resolution
- 0.01% basic VDC accuracy
- Advanced triggering options such as external, bus and event trigger
- Two and four-wire resistance measurement up to 120 M?
- AC voltage and AC current measurement over wide frequency range (ACV 100 kHz/ACI 10 kHz)
- AC (RMS) and DC current measurements up to 12 A
- Limit mode for Pass/Fail testing
- Save/recall up to 10 instrument settings
- Built-in math functions: Rel, Max/Min, dBm, dB, %, Hold, Compare
- CATI (1000 V)/CATII (300 V) protection
- USB (Virtual Com) and RS232 interface
- SCPI compatible
- For GPIB interface order 5492B-GPIB

Part No.	Description	Price
01BK5492B	5 1/2-Digit Bench Mulitmeter	$649.00
01BK5492B-GPIB	5 1/2-Digit Bench Mulitmeter with GPIB	$789.00

GW INSTEK BENCH DMM

3 1/2 DIGIT LCD DISPLAY

MODEL GDM-8034

- Built in cap meter
- 0.5% basic DCV accuracy
- Diode test and audible continuity check

DC Volts: To 1,000V, 5 Ranges
AC Volts: To 750V, 5 Ranges
AC/DC Current: To 20A, 6 Ranges
Resistance: To 20M, 6 Ranges
Capacitance: To 20 F, 5 Ranges

Part No. 01DM8034 • Price $176.00

GW INSTEK 3 1/2 DIGIT LAB DMM

LED DISPLAY – *MODEL GDM-8135*

- 7 functions
- 0.5" Red LED Display
- 1200V high voltage, 20A current range
- Circuit protection all ranges
- 0.1% DCV accuracy
- Auto zero circuit

DC Volts: 1200V, 5 Ranges
AC Volts: 1000V, 5 Ranges
DC Current: 20A, 6 Ranges
AC Current: 20A, 6 Ranges
Resistance: 20M, 6 Ranges
Diode Test
Audible Continuity Check

Part No. 01GDM8135 • Price: $260.00

INSTEK PRECISION LCR METERS

Models 8101G - 1MHz, 8105G - 5MHz, 8110G - 10MHz

Provide accuracy and versatility for a wide range of component measurements, including DC resistance and Voltage/Current monitoring. Multi-step function allows customized measurement with Pass/Fail indication within users' selected parameters. GPIB and RS-232 are installed as standard features. Measurement Parameters: impedance, phase angle, inductance, capacitance, AC resistance, quality factor, dissipation factor, admittance, conductance, reactance, susceptance, DC resistance. GRAPH MODE is now a standard feature included with these models.
• Test Frequencies 20Hz ~ 1MHz, 20Hz ~ 5MHz, 20Hz ~ 10MHz
• 6 Digit measurement resolution
• DC resistance measurement
• Monitoring of DUT voltage and current
• 0.1% basic measurement accuracy
• Comprehensive measurement functions
• GPIB and RS-232 interface
• Large LCD display, intuitive user interface, multi step mode, Pass/Fail comparator
• GRAPH MODE – Shows the component characteristics in graph charts. Voltage and frequency sweep are selectable for the horizontal scale. Graph automatically adjusts to scale when out of vertical range.
Marker operation for detailed observation

Part No.	Description	Price
01LCR8101	1MHz LCR Meter	$6,088.00
01LCR8105	5MHz LCR Meter	7,177.00
01LCR8110	10MHz LCR Meter	8,743.00

RSR HIGH VOLTAGE PROBE

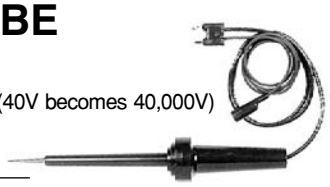
MODEL HVP40

- 40,000 volts max DC.
- 28,000 volts max AC (50/60 Hz).
- 1,000M input impedance.
- Accuracy DC: 1% to 20KV; 2% to 40KV
  AC: 5% to 10% (50/60 Hz)
- Division ratio 1,000:1
- For 10M ohm input impedance DMM (Accuracy <0.5%) only

Part No. 01HVP40 • Price $57.00

BK PRECISION HIGH-VOLTAGE MULTIPLIER PROBE

MODEL PR-28A



- Multiplies instrument ranges by 1,000 (40V becomes 40,000V)
- PR-28 for use with high impedance (10MΩ or greater) voltmeter

Part No. 01PR28 • Price: $62.00

BK PRECISION HIGH VOLTAGE PROBE METER

MODEL HV44A

Offers extreme reliability and user safety. Measures voltage up to 40,000 VDC. Factory calibrated at 25KV (+2%). Full scale +3% accuracy. Supplied with two tips. Positive polarity only – Not for microwave ovens. Carrying case (LC-32) optional.

Part No. 01HV44 • Price: $119.00

RSR LOGIC PULSER

MODEL 620

The LP620 logic pulser is an invaluable tool for the troubleshooting and inspection of circuits. It is used to inject a signal directly into a logic circuit without removing components. This pulser is circuit powered and has a switchable output of .5 or 400 Hz at 100 mA.

Part No.	1-9	10+
01LP620	$16.50	$15.50

RSR LOGIC PULSER

- 9 Selectable Frequency Pulse Output
- Handy Quick & Easy to use
- Accurate Time Base Generator
- LED Operation Indication
- Open Collector Output
- Compact for In-Circuit and Outdoor Trouble Shooting

Part No. 01DPSJ • Price: $12.50

BK PRECISION DIGITAL LOGIC PROBE

MODEL DP 21

Tests TTL, and CMOS Displays pulse presence and logic states Memory mode "freezes" pulse display Catches pulses to 30ns or pulse trains to 20MHz 1 Minput impedance

Part No. 01DP21 • Price: $37.00

RSR LOGIC PROBE

MODEL 610B/611

The LP610 logic probe is designed for troubleshooting fast logic circuits. It features TTL and CMOS compatibility, switch-selectable pulse detection or pulse memory function, LED indicators for Hi, Low, and Pulse/Memory, minimum pulse width detection of 30 nanoseconds and a maximum input frequency of 20MHz. This unit is circuit powered.

Part No.	Description	1-9	10+
01LP610	With Beeper	$16.95	$16.50
01LP611	Without Beeper	15.95	14.50
01TIPLP	Tip for 610/611	0.95	0.85

RSR LOGIC PROBE

- For DTL, TTL and CMOS testing
- Handy Quick & Easy to use
- High Frequency Response
- Instant Indication
- With Pulse Memory Function

Part No. 01LPPRO1 • Price: $11.95

BK PRECISION 50 MHZ LOGIC PROBE

MODEL DP 52

Tests TTL and CMOS Displays
DC to 50 MHz Detects 10ns pulse width Overload protected

Part No. 01DP52 • Price: $48.00

LOGIC PROBE

AVAILABLE AS KIT ONLY

MODEL LP525K

Handy for troubleshooting TTL/LS and CMOS/MOS digital circuits. Color codes LEDs indicate high, low or pulsed logic states (up to 20MHz). Tone output-high, low or both. Detectable pulse width: longer than 30ns.

Part No. 01LP525K (Kit) • Price: $12.50

RSR LOGIC PROBE AND PULSER COMBO

50MHZ – *MODEL 625*

Logic probe and pulser in one, simplifies troubleshooting digital circuits. Max. input signal frequency: 50 mHz, input impedance: 120KΩ; minimum detectable pulse width: 10 nanosecond; pulser: sync. input impedance 1 MΩ; pulse rate: switchable .5pps or 400pps; pulse width: 10 sec.

Part No.	1-9	10+
01LP625	$23.95	$19.50

BK PRECISION LOGIC PULSER PROBE

MODEL DP 31A

- For TTL, and CMOS
- Produces 10mS pulse signals at 100mA
- External square wave terminal
- Sync input terminal
- 0.5pps/400pps Pulse repetition Rate

Part No. 01DP31• Price: $37.00

RSR ANALOG MULTIMETER KIT

MODEL AMK200

A quality, high performance meter at an affordable price. This meter is available in kit form.

AMK-200 Kit

SPECIFICATIONS:

DC Volts: 0 to 2.5V, 10V, 50V, 250V, 1,000V.
AC Volts: 0 to 10V, 50V, 250V, 1,000V.
DC Current: 0 to 5mA, 50mA, 500mA, 10A.
Resistance: X1, x10, X1K.
Sensitivity: 20,000 ohm/V DC and 8,000 ohm/V AC.

Part No.	Description	1-9	10+
01AMK200	Meter Kit	18.95	17.95
01MM200	Meter Movement For AMK200	9.95	8.95

RSR ANALOG & DIGITAL MULTIMETER

MODEL 7030

Experience the convenience of having the accuracy of a digital display, plus the ability to measure varying voltages with the analog needle. Includes test leads, 9V battery, protective holster and user manual.

- Two meters in one – true Analog (needle/ pointer,NOT bar graph) and digital Readout
- 1.5V and 9V battery test
- All range fused, zero adjustment, diode test and continuity buzzer
- **AC & DC Volt:** 0~600V, 5 ranges. 200mv/2V/20V/200V/600V
- **AC & DC Current:** 0~10A, 5 ranges. 200uA/2,000mA/20,000mA/ 200mA/10A
- **Resistance:** 0~20M, 6 ranges. 200 ohm/2K/20K/200K/2M/20M
- **Size** (mm): 190 W x 108 H x 50 D
- **Weight:** 1 lb. 2 oz

Part No.	
01AMDM7030	$39.95

RSR ANALOG METER

MODEL YX360TRB

- Excellent DC resolution factor of 2mV and expanded resistance measurement for 0.2Ω–20MΩ.
- A large and bright meter with a scale length of 80mm and its sensitivity of 44 A at full scale.
- Fuse and diode protection.
- Measures hFE to 1000 using transistor testing socket.
- **DC Voltage**: 0.1/0.5/2.5/10/50/250/1000V (20KΩ/V) 3% f.s.
- **AC Voltage**: 10/50/250/1000V (9KΩ/V) 4% f.s.
- **DC Current**: 50 /22.5m/25m/250mA 3% f.s.
- **Resistance:** 2K/20K/200K/2M/20mΩMAX 3% of arc.
- **dB**: –10~62dB.
- **Power Source**: (9V) X 1, (1.5V) X2
- **Dimensions/Weight:** 6" x 1 1/4" x 4" / 9 oz.

Part No.	1-9	10+
01AM360TRB	$12.95	$11.95

RSR ANALOG METER

Best Value!

MODEL 7050

- 7 functions 20 ranges.
- High sensitivity and accuracy.
- **DC Voltage**: 0~0.1/2.5/25/250/500V (20KΩ/V) 3% f.s.
- **AC Voltage**: 0~10/50/250/500V (9kΩ/V) 4% f.s.
- **DC Current:** 0~50 /5m/50m/500m/10A 3% f.s.
- **Resistance**: 0~2K/20K/200K/2M/20MΩ 3% full arc (Arc length: 75.3mm)
- **Continuity Buzzer**: R X 1 range 0~30Ω sound.
- **Battery Test**: 1.5V (150mA)/9V (10mA)
- **Decibel**: –10 ~56 dB (0dB: 0.775V 1mW 600Ω).
- **Power Source:** 9V X 1, 1.5V X 2
- **Fuse**: 0.5A/250V 5 X 20mm fast acting 10A/250V 5 X 20mm fast acting.
- **Size**: 7.5" x 4.3" x 2" (including holster); **Weight**: 1 lb.

Part No.	1-9	10+
01AMA7050	$22.95	$21.95

Simpson VOM *MODEL 260-8*

High quality. 27 ranges. Rugged Taut-band meter movement. Varistor protected. Complete with test leads and manual. Size: 5 1/4" x 7" x 3 1/8"

SPECIFICATIONS:

DC Volts: 0-0.25, 1, 2.5, 10, 50, 250, 500,1000
AC Volts: 0-0.25,10, 50, 250, 500, 1000
DC mA: 0-1, 10, 100, 500 and 10A
db Scale: 20 to +-50
Resistance: R x 1(0-2K); R x 100 (0-200K); R x 10K (0-20M)

MODEL 260-8P

Has all the features of Model 260-8 and in addition includes a reset push button for overload and mirrored scale.

Part No.	Price
01260-8	$265.00
01260-8P	345.00

CASES FOR VOM

Part No.	Description	Price
0100832	Grab-N-Go (Padded Nylon)	$67.95
0100805	Leather-Like	83.95
0145028	Molded Plastic	94.50
0100248	Roll Top	72.95

ELENCO™ ANALOG METER KIT / ASSEMBLED

MODEL 1250

- 3 1/2" movement; mirrored scale; audible continuity; db scale; battery test
- Checks transistors / diodes
- 23 ranges, 20,000 Ω/v

SPECIFICATIONS

DC Volts:	.1, .5, 2.5, 10, 50, 250, 1000
AC Volts:	10, 50, 250, 1KV
DC Current:	50 A, 2.5mA, 25mA, 250mA 10A
Resistance:	x1, x10, x100, x1K, x10K
Accessories:	Test Leads, Manual, 9V and (2) 1.5 AA Batteries Included
Weight:	10 oz.

Part No.	Description	Price
01AM1250K	Kit	$25.95
01AM1250	Assembled	24.50

RSR SENSITIVE GALVANOMETER

EDUCATION METER SERIES

- **Range:** –300 A to 300 A or –500 A to 500 A
- **Internal Resistance:** 80–125Ω / 2.4–3K or 40–80Ω / 1.5–2K
- **Weight:** 0.35 lb.

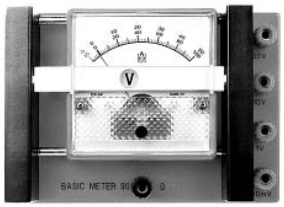
Designed to measure weak current or the potential difference in DC circuit. It may be used in experiments on bridge measurement, thermocouple, electro-magnetic induction and photoelectric effect etc.

Part No.	Description	1-9	10+
01SM1102	Gal. –300 A to +300 A	$9.90	$8.90
01GAL500UA	Gal. –500 A to +500 A	9.50	8.95

RSR METER MOVEMENT

MULTIFUNCTION

EDUCATION METER SERIES



- **DC Voltage Range:** 0-100mv – 1v – 10v – 50v
- **DC Current Range:** 0-100 A – 100mA – 1A – 5A
- **Sensitivity:** DC 10KΩ/V
- **ACCURACY:**
  DC Voltage: 2.5% of full scale
  DC Current: 2.5% of full scale
- **Weight:** 0.8 lbs.

Part No.	Price
01KAL41	$13.75

TRIPLETT CORPORATION

PORTABLE INSTRUMENTS

- Ideal for schools, labs and other basic monitoring needs.
- Wide, clear view plastic 3½".
- AC iron vane types are true RMS
- 2% accuracy on DC and AC iron vane type
- 3% accuracy on AC rectifier type and ohms
- 3% accuracy on temperature.
- AC iron vane type and ohm meter type movements are fuse protected.
- Durable molded plastic case.

Part No	Description	Price
01TR3500	0-1-5-25 Volts DC	$104.00
01TR3501	0-25-100-500 Volts DC	104.00
01TR3541	0-5-25 V AC, Iron Vane Type	133.00
01TR3543	0-150 V AC, Iron Vane Type	125.00

RSR METER MOVEMENTS

PANEL MOUNT AMMETER; VOLTMETER

Molded; transparent face. 5% tolerance. Panel mounting. Hole: 2⅜" dia.

Part No.	Description	1-9	10+
01MAMO-50U	0-50 A DC Amp Meter	$10.95	$9.95
01MAMO-100U	0-100 A DC Amp Meter	10.95	$9.95
01MAMO-1	0-1mA DC Amp Meter	10.95	9.95
01MAMO-50	0-50mA DC Amp Meter	10.95	9.95
01MAMO-100	0-100mA DC Amp Meter	10.95	9.95
01MAMO-500	0-500mA DC Amp	10.95	9.95
01MAMO-1000	0-1A DC Amp Meter	10.95	9.95
01MAMO-5000	0-5A DC Amp Meter	10.95	9.95
01MAMO-10000	0-10A DC Amp Meter	10.95	9.95
01DVMO-10	0-10V DC Volt Meter	10.25	9.25
01DVMO-15	0-15V DC Volt	10.25	9.25
01DVMO-30	0-30V DC Volt Meter	10.25	9.25
01DVMO-100	0-100V DC Volt Meter	10.25	9.25
01AVMO-150	0-150V AC Volt Meter	10.25	9.25
01AVMO-300	0-300V AC Volt Meter	10.25	9.25

RSR METER MOVEMENTS

EDUCATION METER SERIES

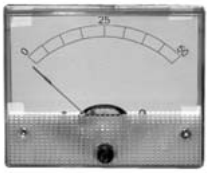
AMMETER; VOLTMETER

Accuracy: 5% full scale

Part No.	Description	1-9	10+
01SM1105	Voltmeter –1 to +3V or –5 to +15V	$9.95	$8.95
01SMAC15	Voltmeter AC; 0 to 3 or 0 to 15V	9.95	8.95
01SM1106	Ammeter DC, 0-200 A	9.95	8.95
01SM1107A	Ammeter DC; 0–100mA	9.95	8.95
01SM1107B	Ammeter DC, 0–500mA	9.95	8.95

RSR METER MOVEMENT

AMMETER DC



- **Range:** 0-50 A
- **Resolution:** 1 A
- **Dimension:** 80 x 80 x 45mm
- **Weight:** 0.154 lbs.

Part No.	1-9	10+
01DK80	$8.25	$7.50

BATTERY TESTER

POCKET SIZE

- Can test AA, AAA, C, D, 9V, Button, hearing aid batteries
- Size: 90 x 60 x 32mm
- Wt.: 100gm

Part No. 01SPBT • Price: $5.95

RSR LCR METER

- Measures inductance, capacitance and resistance
- Handheld with low power consumption
- 5 digits display
- **Test Parameters:** L/Q, C/D, R/Q, Z/Q
- **Test Frequencies:** 100Hz, 120Hz, 1KHz
- **Test Level:** 0.3Vrms
- **Range:**
  L – 1 H to 9999H @ 100/120Hz
  L – .1 H to 999.9H @ 1KHz
  C – 1p to 9999 f @ 100/120Hz
  – .1p to 999.9 f @ 1KHz
- **Power Supply:** 9V battery or 12V adapter
- **Weight:** 1 lb.

Part No. 01LCR2821 • Price $275.00

EXTECH LCR METER WITH PC INTERFACE

Measures inductance, capacitance and resistance with secondary parameters (Q, D, R).

- Set Hi/Lo limits using absolute value or % limits
- Parallel or series equivalent circuit
- Max/Min/Avg recording
- Open and short zero removes unwanted stray impedances
- Built-in RS-232 with Windows® software
- Complete with test leads, alligator clips, 9V battery and holster and cable

Part No.	Description	Price
01EX380193	380193 LCR Unit	$219.99

IntelliTweeze® RECHARGEABLE SMD TESTER

RECHARGEABLE R-C-L TweezerMeter™ IntelliTweeze™ is an R-L-C meter in a tweezer for measuring surface mount chip caps, chip resistors and inductors. An exciting answer to the old problem of identifying, testing and troubleshooting SMD components.

- Measures Resistance, Capacitance, and Inductance
- Measures Continuity
- Measures Diode Polarity

The new updated 2012 model of the IntelliTweeze® is available now.

FEATURES:
- Improved LiPO battery
- USB/Wall adaptor (included)
- Carrying case.
- 1 year warranty.
- Made in Canada.

SPECIFICATIONS
- Resistance Range: 0.05 to 9.9 M Ohm Precision: up to 0.2%
- Capacitance Range: 0.5 pF to 4999 mF Precision: up to 0.2%
- Inductance Range: 0.5 uH to 999 mH Precision: up to 0.5%
- Quality factor Q Range: 0.001 to 1000
- Dissipation factor D Range: 0.001 to 1000

Part No. 01TM500 • Price: $395.00

RSR SMD TESTER FOR RESISTORS & CAPACITORS

Model MS8910

This digital tweezer/tester makes it easy to test tiny surface mount resistors and capacitors. Precise tips made of non-magnetic steel are able to pick and test even the smallest SMD components. It can also test regular components where leads may be too short to insert into test terminals.

- Auto power off
- Low battery indicator
- Built-in high-precision R/C probe
- Ideal for Surface Mount Devices
- Weight: 5.0 oz.

Part No.	Description	Price
01DMMS8910	Digital Tweezer Tester for resistance and capacitance	$29.95

EXTECH TWEEZER COMPONENT TESTER

MODEL RC100

- One hand operation for fast, precise measurement
- 4000 count LCD
- Measures resistance, capacitance, and diode test
- Relative mode for zero or user supplied reference
- Overrange and low battery indicators
- Auto Power off

Part No. 01EXRC100 • Price: $69.95

EXTECH TWEEZER TESTER WITH MULTIMETER

MODEL RC200

- Interchangeable test leads for voltage and SMD tweezers for fast precise identification and measurement
- 6000 count LCD
- Measures AC/DC Voltage, Resistance, Capacitance, Continuity and Diode test
- Auto/manual ranging
- Overange and low battery indicators
- Auto Power off
- Complete with two AG13/LR44 batteries, test leads, SMD tweezers, and carrying case

Part No. 01EXRC200 • Price: $74.99

RSR CAPACITANCE METER

Best Value!

MODEL MY6013

- 3 1/2 digit LCD display.
- Nine ranges from 200pf to 20,000 F.
- External zero adjustment knob.
- **Size**: 3.6" x 7.4" x 1.3"
- **Weight**: 8 oz.

Part No. 01MY6013 • Price: $37.95

BK PRECISION LCR METER

MODEL 875B

- Measures capacitance – 0.1pf to 20,000 F with 1% accuracy up to 200 F and 2% after that
- Measures inductance – 0.1h to 200H; accuracy 2%
- Measures dissipation factor of caps and "Q" of inductor
- Measures resistance – 1 milli Ω to 20MΩ
- 3 1/2 digit LCD
- Low battery and overload indicator

Part No.	Price
01CT875B	$225.00
01TL8	26.00

Opt. SMD Probe

TL-08

BK PRECISION LCR BRIDGE

DUAL DISPLAY HAND-HELD

4□ DIGIT DISPLAY WITH AUTO RANGING AND USB INTERFACE

Models 878B / 879B

- Measures capacitance, resistance and inductance.
- In circuit mode (Model 879B only)
- Components can be measured with selectable test frequencies in series or parallel mode.
- Measures dissipation factor of capacitors "D" and "Q" of inductors.
- Remembers minimum and maximum values.
- Excellent for sorting parts in engineering, QC or production. Keeps running average of tested components.
- Selectable test frequencies 100Hz, 120Hz, 1KHz, 10KHz, (120Hz and 10KHz Model 878B)
- Relative mode
- Backlight (Model 879B)
- Accessories: Alligator clip leads, 9V battery, USB cable
- AC Adaptor included (879B Only)
- Capacitance: Up to 20mF
- Resistance: Up to 10M Ohm
- Inductance: Up to 1000H
- Dimensions: 7.2" (L), 3.4" (W), 1.6" (H)
  Weight: 10.725 lbs.

Part No.	Description	Price
01BK878	Model 878B	$249.00
01BK879	Model 879B	299.00

RSR LCR METER

Best Value!

- Measures inductance, capacitance and resistance
- Handheld with low power consumption
- 5 digits display
- **Test Parameters:** L/Q, C/D, R/Q, Z/Q
- **Test Frequencies:** 100Hz, 120Hz, 1KHz
- **Test Level:** 0.3Vrms
- **Range:**
  L – 1 H to 9999H @ 100/120Hz
  L – .1 H to 999.9H @ 1KHz
  C – 1p to 9999 f @ 100/120Hz
  – .1p to 999.9 f @ 1KHz
- **Power Supply:** 9V battery or 12V adapter
- **Weight:** 1 lb.

Part No. 01LCR2821 • Price $275.00

BK PRECISION IN-CIRCUIT ESR & DCR CAPACITOR TESTER

MODEL 881

The 881 is a portable In-Circuit ESR meter that measures the equivalent series resistance of electrolytic caps in or out of circuit. It also measures low value non-inductive resistors.

FEATURES:

- ESR from 0.1 ~ 30 ohm
- Tricolor chart shows ESR readings of Good, Fair, and Bad
- DCR from 0.1 to 30 ohm
- 15 mVp-p output test voltage (will not turn on any solid state devices)
- Comes complete with one-handed tweezer test probe

Part No.	Description	Price
01BK881	Model 881 In-Circuit Cap Analyzer	$210.00

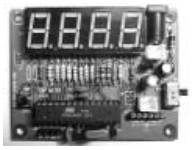
RSR LCR METER WITH PC INTERFACE

Measures inductance, capacitance and resistance with secondary parameters (Q, D, R).

- Set Hi/Lo limits using absolute value or % limits
- Parallel or series equivalent circuit
- Mix/Max/Avg recording
- Open and short zero removes unwanted stray impedances
- Built-in RS-232 with Windows software
- Complete with test leads, alligator clips, 9V battery and holster and cable

Part No.	Description	Price
01EX380193	380193 LCR Unit	$219.99

CAPACITANCE METER KIT



You will have your own capacitance meter after successful completion of this project.

- Range: 1pf – 500 F
- About 1% accuracy
- Automatic range switch
- Zeroing available
- Real time serial output of measurement read-outs with time stamp
- Low cost and easy to build
- 8 to 16V DC power supply required *(but not included))*
- **Size:** 3" x 2.3" x 0.6"; **Wt:** 1.5 oz.

Part No.	Description	Price
32JYE06001	Cap. Kit	$13.95
32JYE06002	Cap. Meter Assembled	15.95
16D9500MA	9V DC Adapter	4.75

GW INSTEK PRECISION LCR METERS

MODEL LCR816

- 0.2% accuracy
- 100Hz ~ 2 KHz
- 100 memory sets for setup save/recall
- Absolute value, Δ value and Δ% measurement display
- 240 x 128 back-lit LCD display
- Test condition and result displayed simultaneously
- Probe set included
- Display range:

R	0.00000Ω ~ 99999KΩ
C	0.00000pF ~ 99999 F
L	0.00000mH ~ 99999H
Q	0.0000 ~ 9999
D	0.0000 ~ 9999

Part No.	Description	Price
01LCR816	LCR Meter	$855.00
01LCR05	Radial Lead Test Fixture	189.00
01LCR08	SMD Test Fixture	235.00

BK PRECISION LCR / ESR METER

IN-CIRCUIT; SYNTHESIZED

MODEL 885

SMD Probe Included

This meter is the first handheld meter of this type on the market, with a wide range of test frequencies up to 10KHz and many measurement parameters including Z, L, C, DCR, ESR, D, Q and ∅ as well. The 885 is designed for both component evaluation on the production line and fundamental impedance testing for bench-top applications. With a built-in direct test fixture, you can test the lead components very easily. The optional 4-wire test clip can give a convenient connection to larger components and assemblies with the accuracy of 4-wire testing.

FEATURES:

- Measurement parameters: Z, L, C, DCR, ESR, D,Q, and Ø
- Test conditions: 100Hz, 120Hz, 1KHz, 10KHz, 1Vrms, 0.25Vrms, 0.05Vrms
- 0.5% basic accuracy
- Dual LCD display
- SMD surface mount tweezer probe included
- Very quick response, user friendly
- Fully auto/manual selection
- DC resistance measurement
- Rechargeable battery / AC powered
- Infrared RS-232 interface capability

SOFTWARE FEATURES:

- Go-No Go testing (component sorting)
- Remote bin (component grading)
- Remote operation

Part No.	Description	Price
01BK885	LCR/ESR Meter	$595.00
01BKTL08C	Test Clip - 4 Wire	83.00

BK PRECISION CAP METER

PROGRAMMABLE – *MODEL 890B*

The Model 890B Capacitance Meter features a large 4 1/2 LCD with dual display, 11,000 counts resolution, and 9 automatically selected ranges with full scale value from 1.0pF to 50mF. Designed to meet the latest international safety standards, the meter's dedicated chip and microprocessor allow programmable high/low limits or pre-programmed standard capacitor tolerances, making it ideal for measuring values, inspection, sorting capacitors and testing capacitors against standard tolerances. Optional software and cabling is available for PC based data logging and monitoring.

- Dual display simultaneously displays value and deviation from selected tolerance
- Sort on preset tolerance of 1, 5, 10%
- Program unique values to sort for specific circuit applications
- USB PC interface for data logging software available

Part No.	Description	Price
01CT890	Capacitance Sorting Meter	$149.00

BK PRECISION CAPACITANCE METER – *MODEL 810C*

- 3 1/2 digit LCD display
- Nine ranges from 200 pF to 20,000 F
- 0.1 pF resolution
- Low battery and over-range indicator

Part No. 01CT810 • Price: $85.00

BK PRECISION CAPACITANCE METER

AUTO RANGING, PROGRAMMABLE–*MODEL 830B*

The Model 830B Capacitance Meter features a large 4 1/2 LCD with dual display, 11,000 counts resolution, and 9 automatically selected ranges with full scale value from 1.0pF to 199.99mF. Designed to meet the latest international safety standards, the meter's dedicated chip and microprocessor allow programmable high/low limits or pre-programmed standard capacitor tolerances, making it ideal for measuring values, inspection, sorting capacitors and testing capacitors against standard tolerances. Optional software and cabling is available for PC based data logging and monitoring

- Auto ranging
- Dual display simultaneously displays value and deviation from selected tolerance
- Sort on preset tolerance of 1, 5, 10%
- Program unique values to sort for specific circuit applications
- USB PC interface for data logging software available

Part No.	Description	Price
01CT830	Auto Ranging Cap Meter	$289.00

GW INSTEK HIGH PRECISION LCR METERS

MODEL LCR 819 & MODEL LCR821

- Measures capacitance, resistance and inductance.
- 12Hz to 100KHz, 503 continuously variable frequencies.
- .05% high measurement accuracy.
- 100 sets memory for save/recall of setup state.
- R/Q, C/D, C/R, L/Q test modes.
- Absolute Value, Δ Value, and Δ% measurement display.
- 240 x 128 dot matrix LCD display.
- Test condition and test result shown on screen simultaneously.
- Kelvin probe set included (LCR06).
- ***MODEL LCR 821***: Features a 200kHz frequency ramp, additional test modes plus RS232 and software included.

Part No.	Description	Price
01LCR819	LCR Meter Model LCR 819	$1,655.00
01LCR821	LCR Meter Model LCR 821	2,295.00
01LCR05	Test Fixture For Radial Leads	189.00
01LCR08	Test Fixture for SMD Components	235.00

RSR CLAMP METER DIGITAL

MODEL M9912

- **Display:** Digital and analog display, 3200 counts and 33 segments bar graph.
- **DC Voltage**: 3/30/300V 0.8%, 1000V 1.0%.
- **AC V oltage**: 3/30/300V 1.0%, 750V 1.2%.
- **DC Current:** 300/1500A <600A 2.0% >600A 3.0%.
- **AC Current**: 300A, 1500A <600A 2.0% >600A 3.0%.
- Max diameter for conductor 50mm.
- **Resistance:** 300/3K/30K/300K/3MΩ 1.5%, 30mΩ 2.0%.
- **Frequency**: 30KHz 2.0%
- Diode test, data hold.
- Continuity test, back light.
- Autorange and manual range.
- **Size**: 11' x 4.1" x 1.9"; **Weight**: 1.1 lb.

Part No. 01M9912 • Price: $82.00

TPI TRUE RMS CLAMP METER WITH HARMONICS FEATURE

MODEL TPI 296

- True RMS for accurate readings of non-linear loads.
- **HDR Mode** – Displays harmonic distortion ratio on ACV and ACA at line voltage and 60Hz. Determine if signal clean or distorted.
- **Trim Mode** – Averages readings for more stable output to display.
- **Peak Hold** – Measures in-rush current of motors, relays and solonoids.
- Min, max and average recordings.
- Measures frequency of current while simultaneously displays current level on bar graph display.
- Data hold, sleep mode, three year warranty, soft pouch included.

DCV: 750V, 3 Ranges. 0.75% Accuracy
ACV: 750V, 3 Ranges
AC Current: 700 Amp, 3 Ranges
DC Current: 700 Amp, 2 Ranges
Resistance: 40K, 3 Ranges
Frequency: 10KHz, 2 Ranges

Part No.	Description	Price
01CM296	TPI Model 296	$196.00
01A201	Hard Carrying Case	9.90

B+K PRECISION AC/DC TRUE RMS CLAMP METER

MULTIFUNCTION / 1000A – *MODEL 369B*

All of B+K Precision clamps are much more than a current clamp offering the ability to measure, voltage resistance, capacitance and even frequency. Additionally, special features allow for the recording of minimum and maximum values, peak values, test diodes and for continuity.

- Measures up to 1000A
- Measures up to 1000VDC & 750Vac
- Jaw openings 2.24"

Part No. 01BK369 • Price: $209.00

B+K PRECISION CLAMP METER

MODEL 367A

- DC & AC current to 2000A (2 ranges)
- DC voltage to 200V
- AC voltage to 750V
- Resistance to 2KΩ
- Peak Hold, Data Hold
- 1 3/4" clamp opening

Part No. 01CM367 • Price: $225.00

RSR AC/DC DIGITAL CLAMP METER

MODEL MS2138

- Double insulation (600V CATIII rating)
- **AC and DCV:** Four ranges to 600V
- **AC and DC Current:** Two ranges to 600A
- **Resistance:** To 40M in six ranges
- **Frequency:** 100KHz from test terminal, 400Hz from current clamp
- Back-lit 3999 count display with 42 segment bar graph
- **Standard Features:** Auto/manual ranging, auto zero key for DCA, data hold, min/max, jaw lighting, auto power off, continuity and diode tests

Part No. 01MS2138 • Price: $62.95

EXTECH INSTRUMENTS CLAMP METERS

MODELS MA200, MA220

- Compact size
- Auto power off
- One touch "Auto Zero" ***(MA220)***
- Temperature, frequency and capacitance ***(MA220)***
- 2,000 count ***(MA200)***, 4,000 count ***(MA220)***
- **AC/DC Volts:** 600V
- **AC Current:** 400A
- **DC Current:** 400A ***(MA220)***

Part No.	Description	Price
01MA200	400A AC Clamp	$54.94
01MA220	400A AC/DC Clamp	109.99

MA200 **MA220**

EXTECH INSTRUMENTS CLAMP METERS

MODELS EX710, EX810, EX830

- True RMS ***(EX830)***
- Frequency, temperature, capacitance
- **AC Current:** 1,000A ***(EX810, EX830)***; 800A ***(EX710)***
- **DC Current:** 1,000A ***(EX830)***
- **AC/DC Volts:** 600V
- **Temperature (IR):** –58 to 518 F ***(EX830)***

Part No.	Description	Price
01EX710	800A, Clamp	$89.99
01EX810	1,000A, Clamp	149.99
01EX830	1,000A, True RMS Clamp	219.99

EX810, EX830 **EX710**

TRIPLETT CORPORATION AC/DC CLAMP-ON METER

TRUE RMS *MODEL 9325*

- CAT III 600V
- AD/DC current to 1000 A
- Resistance to 60 M Ohm; Frequency Ranges 10 Hz to 10 KHz
- AC Voltage sensor with visual notification

Part No. 01TR9325 • Price: $149.00

RSR

AC/DC DIGITAL CLAMP METER

MODEL MS2138

- Double insulation (600V CATIII rating)
- **AC and DCV:** Four ranges to 600V
- **AC and DC Current:** Two ranges to 600A
- **Resistance:** To 40M in six ranges
- **Frequency:** 100KHz from test terminal, 400Hz from current clamp
- Back-lit 3999 count display with 42 segment bar graph
- **Standard Features:** Auto/manual ranging, auto zero key for DCA, data hold, min/max, jaw lighting, auto power off, continuity and diode tests

Part No. 01MS2138 • Price: $62.95

AMPROBE

AC LINE SPLITTER

MODEL ELS2

- Measures load current without splitting line cord
- X1 and X10 measurement points
- Built-in voltage measurement jack

Part No. 01ELS2 • Price: $18.90

FLUKE

CLAMP METERS

MODELS: 373; 374; 375;376

Work horse clamps with increased perfmance and flexiblility

373

374

- True RMS current and voltage (All models)
- AC/DC Volts: 600
- AC Current: 600A; 1000A (376 only)
- Resistance: 6K Ohm (373, 374); 60K Ohm (375 & 376)
- Auto shut-off, display hold
- Frequency: 500HZ (375, 376)
- Capacitance 1-1000uF
- Flex Probe: 18"; flex probe can measure up to 2500A (Model 376)
- Soft carry case
- Warranty: three years

375

376

Part No.	Description	Price
01FL373	Clamp Meter 373	$169.00
01FL374	Clamp Meter 374	260.00
01FL375	Clamp Meter 375	270.00
01FL376	Clamp Meter 376 with iFlex™	345.00

FLUKE

CLAMP METER

MODEL 374 TRUE-RMS AC/DC

The Fluke 374 True-rms Clamp Meter can read up to 600 V and 600 A in both ac and dc modes. Additionally, the 374 is compatible with the new iFlex flexible current probe (sold separately), which increases the measurement range to 2500A AC and provides increased display flexibility, and improved wire access.

Part No.	Description	Price
01FL374	True-RMS AC/DC Clamp Meter 374	$250.00

BK PRECISION

CLAMP METERS

MODELS 312B, 313A – MINI AC CLAMP METERS
MODEL 316 – MILLI-AMP AC/DC CLAMP METER

These models offer, in addition to current reading, the ability to measure voltage and resistance. Practical where a traditional sized meter may be to cumbersome to use. Features include, overload protection, low battery indicator, 0.98" clamp opening size, continuity test, 2 times/sec. sample rate, auto ranging, data hold. Model 316 also features a 4 digit display, and auto-off.

312B 313A 316

RATINGS	313A	312B	316
AC Current	600A	200/600A	100A
DC Current	600A	100A	
AC Voltage	600V	200/600V	600V
DC Voltage	600V	—	600V
Resistance	1K	200 Ohm	10K

Part No.	Description	Price
01CM312	BK Model 312B mini clamp meter	$85.00
01CM313	BK Model 313A mini clamp meter	159.00
01CM316	BK Model 316 milli-amp clamp meter	169.00

AMPROBE

3 3/4 DIGIT AC CLAMP METERS

AUTORANGING, TRUE RMS
MODELS AC65, AC68

AC65

AC68

- **AC Current** (400A/600A)
- **DC Voltage:** 600V ***(AC68)***
- **AC Voltage:** 600V
- **Resistance:** 40K
- **Frequency:** 20KHz ***(AC68)***
- **Counts:** 4,000

Part No.	Descr.	Price
01CMAC65	AC65	149.00
01CMAC68	AC68	175.00

TACHOMETER PHOTO/CONTACT

MODEL DT2236

- Photo tach. 5 to 100,000 RPM
- Contact tach. 0.5 to 19,999 RPM Includes both a photo and contact tachometer into one precision instrument. Comes complete with accessories, reflective tape and carrying case.
- Can measure surface speed

Part No.	Price
01DT2236	$155.00

DIGITAL STROBOSCOPE

- 100–10,000 RPM/flash per min.
- **Accuracy**: (.05% +1d)
- Xenon flash tube, 8mm red LED
- **Size:** 210 x 120 x 120 mm

Part No. 01DT2239A • Price $211.00

DIGITAL STROBOSCOPE W/ RS232 INTERFACE

- Range**:** 20 to 10,500 RPM/flash per min
- RPM setting by push button
- External trigger signal input for simultaneous test of measurement
- RS232 computer interface

Part No. 01DT2269 • Price: $235.00

RSR〰 DIGITAL ANEMOMETER W/TEMP.

- Measures wind speed in m/s, km/hr, ft/min. and knots & temperature
- Twisted vane arms sensor
- Data hold
- Accuracy: 2% + 1 digit
- Sensor head: 2.8" dia.

Equipped with conventional twisted vane arms sensor, it is sensitive to low wind speed and can measure as high as 90 miles/hr. It is used in wind tunnel, heating/air conditioning, and automotive applications.
Complete with sensor probe and manual.

Part No. 01AM4202 • Price: $145.00

RSR〰 PH METER

- 0 to 14 pH x .01 pH
- Max, min., memory recall button
- -P circuit with LCD display
- pH, mV, temp., manual temp adj.
- PH electrodes *(optional)*

Part No.	Description	Price
01PH207HA	PH Meter	$95.00
01PE03	Electrode, General Cost Effective	26.00
01PE01	Electrode, Laboratory, High Quality and Field Usage	50.00

RSR〰 LIGHT METER

MODEL LX - 101

- 0-50,000 Lux in 3 ranges
- Accuracy 5% + 2 digits
- Size: 4.3" x 2.9" x 0.9"
- Spectrum meets C.I.E. photopic
- Equipped with precision selenium photo-voltaic cell. Ideal for photographers and lighting industry. Complete with light sensor, carrying case and manual

Part No.	Price
01LX101	$65.95

RSR〰 LIGHT METER

- 2,000/20,000/100,000 Lux
- Data hold
- Tungsten, fluorescent, mercury sodium — 7 light type select
- Microprocessor circuit
- Size: 185 x 78 x 38 mm

Part No. 01LX107HA • Price: $80.00

RSR〰 HUMIDITY/TEMPERATURE METER WITH RS232 INTERFACE

MODEL MS6503

- Simultaneous display both RH and temp
- Adjustable interval data logging
- **Humidity:** Range 0 ~ 100%, 0.1% resolution, 2.5% accuracy
- **Temperature:** Range –20 C ~ 60 C, –4 F ~ 140 F, resolution 0.1 C, 0.1 F, accuracy 0.7 C, 1.4 F
- 4 digit LCD with backlight, min/max, data hold, timer, auto off, compact size and weight
- **Response Time:**
  Humidity – 75 sec. in slowly moving air
  Temp – 40 sec in slowly moving air
- Unit comes complete with manual, battery, case, software, cable, probe

Part No. 01HT6503 • Price: $169.00

PURE WATER TESTER

Displays water purity by measuring its conductivity. Using this meter you can quickly evaluate the effectiveness of water filters, purity of water used for industrial process, or just for drinking. Does not detect toxic particles.

Display: 31/2 LCD
Measurements:
0-1999 S (micro Siemens)

Part No. 01WA300 • Price: $89.00

SOUND LEVEL METER

- **Range:** Lo - 35db to 90db, Hi - 75dB to 130dB
- **Accuracy:** 1.5dB (ref 94dB @ 1KHz)
- **Standard:** IEC 651 Type 2
- **Frequency Range**: 32Hz to 8000Hz
- Slow and fast time weighing characteristics
- **Operating Temperature**: –10 C to 50 C, <90% R.H.
- **Battery:** 4 x AAA
- **Dimensions:** 215mm(H) x 44mm(W) x 40mm(D).
- **Weight:** 170g

Part No. 01SL650 • Price: $85.00

DIGITAL SOUND LEVEL METER

- 30-130 db in 3 ranges
- 0.1 db resolution
- 94.0 db calibration built-in
- Max hold; 0.7 db accuracy
- Size: 8" x 3.2" x 1.4"; wt. 10 oz.

It uses condenser microphone for high accuracy and stability. An extra analog output signal can be used for control, data-analysis and recording. Widely used in audio system testing, heating and air-conditioning, work place sound level testing, and highway environmental impact.

Part No. 01SL4001 • Price: $169.95

SOUND LEVEL METER – TYPE 1

- Frequency and time weighting meet IEC651 type 1
- 30 to 130db, 3 ranges
- Max. hold, data hold
- AC out
- Internal 94db calbration
- Size: 260 x 87 x 36 mm

Part No. 01SL4022 • Price $235.00

EXTECH INSTRUMENTS DIGITAL SOUND METER 40-130 ODB WITH LCD DISPLAY

Features:
- 2dB accuracy with 0.1dB resolution
- A+C weighting
- AC analog output
- Record Max/Min values over time
- Utilizes 0.5"(12.7mm) electret condenser microphone

Part No. 01EX3407730 • Price $89.99

BK PRECISION INSULATION TESTERS

These are intended primarily for periodic testing of industrial motors, transformers, electrical wiring and cable insulation for signs of deterioration. Useful for testing of TV sets and appliances to assure no hazardous leakage current.

Model 307A

Model 308A

- Selectable 250V, 500V or 1,000V insulation test
- Low resistance test
- Extra rugged integral carrying case
- Push to test
- ***Model 308*** offers higher accuracy and digital display

Part No.	Description	Price
01BK307	Analog	$205.00
01BK308	Digital	279.00

EXTECH INSTRUMENTS NON CONTACT VOLTAGE & CURRENT DETECTORS

MODEL 40130

Non-contact AC voltage from 100 VAC to 600 VAC. Flashing LED & push button ON/OFF beeper.

MODEL DV30

Non contact AC Voltage Detector (12V to 600V AC). Sensitivity adjustment available

MODEL DVA30

Non contact AC Voltage and Current Detector. AC voltage (12V to 600V), AC current (200mA to 1000A). Sensitivity adjustment available.

Part No.	Model	Price
01EX40130	40130	$11.99
01DV30	DV30	14.95
01DVA30	DVA30	44.99

TRIPLETT RECEPTACLE TESTER GFCI

PLUG BUG

- For use on 110-125 VAC receptacles
- Detects common wiring problems in standard and (GFCI) ground fault circuit interrupter outlets
- To test, simply plug into receptacle, push the TEST button and observe the light pattern
- One Year Limited Warranty

Part No. 29TR9610 • Price: $8.90

RSR EMF TESTER

ELECTROMAGNETIC FIELD TESTER

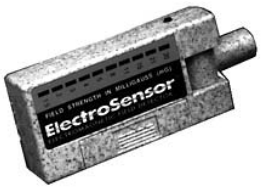
- **Range:** 20/200/2,000 micro Tesla 200/2,000/20,000 milli-Gauss
- Separate Probe
- **Size:** 163 x 70 x 33 mm

Part No. 01EMF827 • Price: $99.00

SonicTechnology ELECTROMAGNETIC FIELD DETECTOR

ELECTROSENSOR

MODEL ES9000



Laboratory studies have shown that EMFs can affect living cells but it is unclear whether these effects are harmful. Current research is expected to provide more answers about potential health effects within the next few years. Until then, it's best to play it safe and know the level of EMFs in your home and work environment. With the push of a button on the hand-held meter, the ElectroSensor quickly and accurately measures the level of EMFs emitted by all common electrical appliances and equipment. L.E.D. scale measures from 1.5 mG to 30 mG.

Part No. 01ES9000 • Price: $29.95

RSR INFRARED THERMOMETER

- **Non Contact Range**: –4 F to –986 F (–20 C to 539 C)
- **Laser Power:** Less than 1mW
- **Accuracy:** 1% 1 C
- **D:S**: 12:1
- **Automatic Turn Off**: 10 seconds
- **Size / Wt.:** 162x56x190mm; 0.6 lbs.

Part No. 01MS6530 • Price: $85.00

BK PRECISION DUAL INPUT TEMPERATURE METER

MODEL 710

- RS232 port
- Dual display capable of switching T1 and T2 between large and small digits. Also, alternating feature on smaller display.
- Centigrade and fahrenheit selectable.
- Auto power off, min/max averaging, data hold, Δ Rel function.
- Uses 9V battery or optional AC adapter.
- –328 ~ 2,498 F range, 0.1 F accuracy.
- Comes complete with 2 K-type thermocouple bead probes, case, battery and instruction manual.
- Optional thermolink software and RS232 cable for real time datalogging.

Part No.	Description	Price
01TM710	Dual Input Temp. Meter	$119.00
01AK710	Software & Cable for 01TM710	49.00

EXTECH MINI INFRARED THERMOMETER

NON-CONTACT

MODELS IR100, IR201

IR100 IR201

- **Surface Temperature:** –31 to 446 F ***(IR100);*** –58 to 518 F ***(IR201)***
- **Maximum Resolution:** 0.1 ***(IR100);*** 1.0 ***(IR201)***
- **Field of View:** 1:1 ***(IR100);*** 6:1 ***(IR201)***
- **Accuracy:** 4 F (2 C)

Part No.	Description	Price
01IR100	Mini Thermometer	$36.95
01IR201	Pocket Thermometer	56.95

RSR TEMPERATURE PROBES – TYPE K

TP01 TP02A TP03

Part No.	Description	Price
01TP01	–40 to 250 C, Naked-bead	$5.95
01TP02A	–50 to 900 C, 3.2mm dia. x 10cm	26.95
01TP03	–50 to 1,200 C, 8mm dia. x 10cm	39.95

RSR DIGITAL THERMOMETER

Best Value!

MODEL TM902C

- **Temperature Range**: –40 C to 250 C with wire temperature probe.
- **Temperature Range:** –40 to 750 C with immersable temperature probe
- **Dimensions / Weight**: 2.8" x 1.0" x 4.3" / 5 oz.

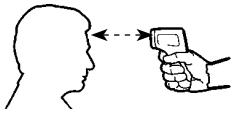
Part No.	Description	Price
01TM902C	Digital Thermometer W/Wire Temperature Probe	$15.95
01TM902C-TP	Immersable Probe	4.95
01TM902IP	Spare Wire Temperature Probe	2.95

EXTECH NON-CONTACT FOREHEAD THERMOMETER

MODEL IR200

More and more people are using non-contact forehead IR thermometers as a simple, quick, touch-less and non-invasive way to perform preliminary screenings.
The Extech IR200 Non-contact Forehead IR Thermometer is designed for simple, fast and accurate initial fever screenings of groups. Clicking the trigger displays an instant temperature reading with 0.1 degree accuracy (Fahrenheit or Celsius). Individuals being screened do not need to remove protective masks or glasses ensuring quick, orderly problem-free fever screenings of large groups.

Optimum Distance 1.9 to 5.9" (5 to 15 cm)



FEATURES

- Measures body temperature from 89.6 F to 108.5 F (32.0 C to 42.5 C) without contact
- Accurate to 0.5 F (0.3 C) with 0.1 F/ C resolution
- Adjustable alarm alerts user visually and audibly when temperature exceeds programmed limit
- Fast repsonse (0.5 seconds)
- Simply press the trigger and read temperature on the large backlit LCD display

Part No. 01IR200 • Price: $99.99

RSR INFRARED THERMOMETER WITH LASER GUIDE

Economical cost, professional quality.

- Non contact temperature range: 14 F to 662 F (–10 C to 350 C).
- Resolution 1 F or 1 C accuracy 3%.
- Built-in laser guide: red less than 1mW.
- F and C selectable.
- 0.95 emissivity provides high accuracy for most surfaces.
- Distance to measuring spot ratio – 8:1
- Easy readout LCD display.
- Records maximum, minimum and relative readings.
- Optional 9V battery *(not included)*

Part No. 01TM919L • Price: $95.00

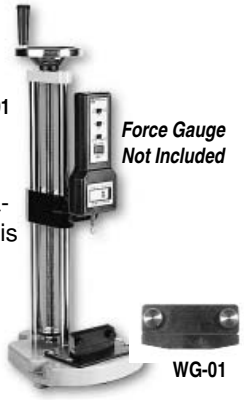
RSR FORCE GAUGE

MODEL FG-20KG

- 20Kg, Kg / LB / Newton
- Tension and compression, peak hold, zero, positive / reverse display
- 5 digit LCD
- Full line accessories

Part No. 01FG20KG • Price: $260.00

RSR FORCE GAUGE TEST STAND



FS-1001

Force Gauge Not Included

WG-01

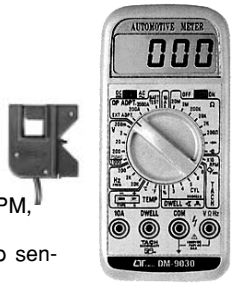
- May be connected to FG-20K
- Whole system will be useful tool for material's tension and compression analysis
- Wedge Grip – To hold material being tested *(Optional)*
- Size: 650 x 250 x 230 mm
- *Force gauge shown is not included*

Part No	Description	Price
01FS1001	Force Gauge Test Stand	$495.00
01WG01	Wedge Grip	23.95

RSR DIGITAL AUTOMOTIVE TESTER

WITH INDUCTIVE PROBE

MODEL DM-9030



- Has all features of a regular Digital Multimeter
- DC V, AC V, Ohms, Freq., Temp., Diode DCA, ACA, Beeper
- Can measure RPM, DWELL
- Inductive pick-up sensor included
- 10MΩ impedance, 18mm LCD
- Size: 185mm x 87mm x 39mm

Part No. 01DM9030 • Price: $85.95

EXTECH PH PENS

- Easy to use, low cost
- Easy to calibrate
- Auto power off
- Complete with built in electrode, sensor cap
- 2 to 12 pH ***(PH50),*** 0 to 14 pH ***(PH60)***
- **Accuracy:** 0.3pH

Part No.	Model	Price
01PH50	pH Pen	$44.99
01PH60	pH Pen with Temperature	54.99

EXTECH INSTRUMENTS COMPACT INFRARED CAMERA

POINT-AND-SHOOT, LIGHTWEIGHT THERMAL IMAGING CAMERA

Features:

- Compact, Focus-Free, Easy-to-Use and Lightweight (13oz)
- Spot, Area (max/min) and Isotherm (above/below) measurement modes
- Temperature range: -4 F to 482 F (-20 C to 250 C)
- 140 x 140 IR detector resolution (19,600 pixels)
- Thermal Sensitivity (N.E.T.D): <0.1 C @ 25 C
- High accuracy of 2% helps you find problems faster and easier
- Large 2.8" color LCD
- MicroSD™ card stores up to 5000 Radiometric JPEG format images
- Complete with 2G microSD™ card, Li-Ion rechargeable battery, 100-240 AC adaptor/charger with EU, UK, AU and US plugs, USB cable, and case
- Includes FLIR Tools™ software for analysis of radiometric images

Part No. 01FLIRI7 • Price $1,995.95

EXTECH INSTRUMENTS COMPACT INFRARED THERMAL IMAGING CAMERA

Features:

- Focal Plane Array detector with 240 x 180 pixels infrared resolution (43,200 pixels)
- Wide temperature range: -4 F to 1202 F (-20 C to 650 C) with 2% or 2 C accuracy
- Manual focus, 4x continuous zoom
- Built-in laser pointer, 3.5" Touch-Screen LCD display with auto orientation
- Built-in 3.1 Megapixel visible light digital camera with bright LED lamp for poorly lit environments
- Multi Spectral Dynamic Imaging (MSX®) feature for extremely detail rich thermal images
- Functions include Scalable Picture-In-Picture, Voice/Text Annotation, Reflected Ambient Temperature & Emissivity Correction
- Measurement modes: up to 3 movable Spots, up to 3 Areas (Min/Max/Average), Auto Hot/Cold spot marker, Isotherm (Above/Below/Interval), Delta T
- METERLiNK™ Bluetooth® Wireless communication
- Wi-Fi Connectivity allows to send images and data to mobile devices
- Video Recording/Streaming, Thumbnail Image Gallery
- Memory card slot for image storage (more than 1,000 Radiometric JPEG images)
- Complete with Memory card, Li-Ion rechargeable battery, power supply, USB and Video cable, hand strap, lens cap and hard carrying case
- Includes FLIR Tools software for analysis of radiometric images

Part No. 01FLIRE50 • Price $5,995.00

ENERGY CONSUMPTION METER

KILL A WATT™

This allows you to measure energy consumption of appliances simply. Simply connect these appliances to the Kill A Watt™, and it will assess how efficient they really are. Large LCD display will count consumption by the Killowatt-hour, same as your local utility. You can calculate your electrical expenses by the day, week, month, even an entire year. Also check the quality of your power by monitoring Voltage, Line Frequency, and Power Factor.

- Large LCD display
- Cumulative Killowatt-Hour Monitor
- Forecast Your Costs
- Also display Volts, Amps, Watts, Hz, VA
- 0.2% Accuracy

Part No. 01P4400 • Price: $28.95

TRIPLETT CORPORATION ENVIRO METER 6-IN-1

MODEL # 9055

- Full function, Auto / Manual Ranging DMM
- Light Meter from 0 to 40,000 Lux
- Sound Meter from 35.0 to 100 dbc
- Relative Humidity Meter
- Temperature Ranges (F & C)
- Capacitance Ranges from 50nF to 100 F
- Visual AC Voltage Detector
- Overload Protection - Fused mA and Amp ranges
- Includes: Safety Test Leads, Thermocouple Probe, and 9 Volt Battery
- Voltage Ranges: AC to 700V, DC to 1000V
- AC/DC Current Ranges to 10 Amps
- Resistance from 400 Ohms to 40M Ohms
- Frequency Ranges form 5Hz to 10MHz
- uA/mA from 400uA to 400mA AC/DC
- CAT IV 600V Rated
- Diode Test
- Continuity Beeper
- REL Mode
- Data Hold
- Auto Power Off

Part No. 01TR9055 • Price: $175.00

RSR LCD PANEL METER

3 1/2 DIGIT; 0.6"

Best Seller!

- Dual slope A/D conversion
- **Accuracy:** .5%
- **Sampling Time:** 2.5 sec.
- **Supply Voltage:** 8 – 12V DC
- **Size:** 68mm x 44mm
- **Input Impedance:** 100MΩ @ 200mv
  10MΩ @ 20mv
  10MΩ @ 200v

Part No.	Description	1-9	10+
01PMLCD1	0–200mv	$7.95	$7.50
01PMLCD3	0–200v	7.95	7.50
01PMLCD5	0–200v with Backlight	11.95	10.95

RSR LCD PANEL METERS

MODEL DV-101 – DC VOLTS
MODEL DA-103 – DC AMPS
MODEL AV-102 – AC VOLTS
MODEL AA-104 – AC AMPS

Easy operation, professional quality, compact. Applications include education, industrial, QC and R&D, Lab.

All Units Feature:

- LCD display, 18mm digit height
- 9V battery operation
- On/off switch
- Automatic zero adjust
- CATII 600V rating
- Approx. 0.4 sec. sampling
- Instruction Manual

Model DV101 DC Volts

- Range/Resolution:
  200mV x 0.1mV
  2V x 0.001V
  20V x 0.01V
  200V x 0.1V
- Accuracy: 200mv range (0.5% + 1 digit) reading
  2V, 20V, 200V ranges (0.8% + 1 digit) reading
- 10M input impedance

Model DA103 DC Amps

- Range/Resolution
  2mA x 0.001mA
  20mA x 0.01mA
  200mA x 0.1mA
  5A x 0.01A
- Accuracy: 2mA, 20mA, 200mA ranges (1% + 1 digit) reading
  5 amp range, (1.5% + 1 digit)
- Overload protection

Model AV102 AC Volts
Measure AC Volts
Range; 2V/20V/200V/600V

Model AA104 AC Amps
Measure AC Amps
Range: 2mA/20mA/200mA/5A

Part No.	Description	1-9	10+
01DV101	DC Volt Meter	$42.50	$39.50
01DA103	DC Amp Meter	42.50	39.50
01ACV102	AC Volt Meter	43.00	40.00
01ACA104	AC Amp Meter	43.00	40.00

RSR AC VOLTAGE TESTER

- Non-contact test of voltage
- Sensitivity adjustable
- TV and Monitor Radiation Test
- Discern from DC volt
- Selftest for safety purposes

Part No.	1-9	10+
01ACMS-48M	$3.95	$2.95

VOLTAGE LED PANEL METER

- Blue 4.5V-30V
- 3 Digit; 1% accuracy
- Best suited for battery level display

Part No.01DFR0130 • Price $8.75

CURRENT SHUNT

- 50mV 50A
- **Current Range:** 0 ~ 50A
- **Accuracy:** 0.5%
- 1mV 1A Output Ratio

Part No. 01FL50A • Price $14.95

RSR LED PANEL METERS

- Red LED display, 5VDC operation
- Large, 0.56 inch character height
- Adjustable decimal point
- 100M input impedance, 2/5 sec sampling time
- **Dimensions:** 44mm H x 68mm W

Part No.	Description	1-9	10+
01DM3A	0-200mV	$10.95	$10.50
01DM3B	0-20V	10.95	10.50
01DM3C	0-200V	10.95	10.50

FUNCTION / SIGNAL GENERATORS

SIGNAL GENERATOR

10HZ – 1MHZ

- **Frequency Range**: 10Hz – 1MHz
- **Accuracy:** 3% + 2Hz
- **Wave Form:** Sine / Square
- **Output: Sine:** 8Vrms; Sq: 10Vpp
- **Attenuator**: 0, -20db, -40db and fine adjuster

Part No.	Price
01SG2601A	$210.00

RSR RF SIGNAL GENERATOR

MODEL SG4160

- 100kHz to 150MHz on six bands
- Output to 450 MHz on harmonics
- AM modulation, Internal or External, 0% to 100%
- Frequency monitor output for external frequency counter
- Step and variable attenation to -40db

Part No. 01SG4160 • Price: $189.95

SIGNAL GENERATOR/COUNTER

MODEL SG-4162AD

The SG-4162AD is a combined radio frequency signal generator and frequency counter. The 6 character LED display allows direct reading either generated internally or from an external source. The frequency generator has a range of 100KHz – 150MHz with sine waveform and adjustable output level. The frequency counter has a range of 10Hz to 150MHz.

Part No.	Price
01SG4162AD	**$335.00**

BK PRECISION RF SIGNAL GENERATOR

MODEL 2005B

- 100kHz to 150MHz on six bands
- Output to 450 MHz on harmonics
- AM modulation, Internal or External, 0% to 100%
- Frequency monitor output for external frequency counter
- Step and variable attenation to-40db

Part No. 01SG2005 • Price: $299.00

GW INSTEK AUDIO GENERATOR

MODEL GAG810

- Frequency Range: 10Hz ~ 1MHz
- 0.02% low sine wave distortion
- 6 step output attenuator
- External sync function
- Square wave output voltage 10V p-p or more (no load)
- Complete with instruction manual, test lead, power cord

Part No.	Price
01GAG810	$220.00

BK PRECISION FUNCTION GENERATOR

5 MHZ WITH DIGITAL DISPLAY

MODEL 4011A

MODEL 4012A (WITH SWEEP FUNCTION)

- Sine, square, triangle, pulse & ramp output
- Coarse & fine tuning
- 4 digit LED display
- Variable duty cycle
- Variable DC offset
- Range: 0.2 Hz to 5 MHz in 7 ranges.

Part No.	Description	Price
01FG4011	Model 4011A	$329.00
01FG4012	Model 4012A (Sweep Version)	$352.00

BK PRECISION SWEEP FUNCTION GENERATOR

10 MHZ WITH DIGITAL DISPLAY – *MODEL 4017A*

- Linear & log sweep
- 5 digit LED display
- All features of BK Model 4011

Part No. 01FG4017 • Price: $390.00

BK PRECISION FUNCTION/SWEEP GENERATORS

4 MHZ – *MODELS 4001A AND 4003A*

4001A

4003A

- Generates 6 waveforms – sine, triangle, square, ramp, pulse.
- 0.5 ~ 4MHz frequency range.
- LIN/LOG sweep mode – width > 100:1 continuously variable.
- Internal/external counter function with 5 digit autorange LED display ***(Model 4003A Only).***
- 20Vp-p output into open circuit.
- TTL output, VCG input, 100% DC offset.

Part No.	Description	Price
01FGBK4003BK	4003A With Display	$251.00
01FGBK4001BK	4001A No Display	187.00

BK PRECISION AUDIO GENERATOR

MODEL 3001

- 20 Hz to 150 kHz Sine/ Square Wave Audio Generator
- Sine and square wave generator
- 20 Hz to 150 kHz in 46 steps
- Low distortion RC oscillator
- Variable output control
- Compact, fully portable, light weight
- Low battery indicator

Part No. 01BK3001 • Price: $85.00

BK PRECISION FUNCTION GENERATOR

2 MHZ – *MODEL 4010A*

- Sine, square, triangle, pulse & ramp output
- Variable duty cycle
- Variable DC offset
- Range: 0.2 Hz to 2 MHz in 8 ranges

Part No. 01FG4010 • Price: $239.00

RSR SWEEP FUNCTION GENERATOR

Best Value!

3 MHZ WITH INT/EXTERNAL COUNTER

MODEL FG-32

This model offers an outstanding price. Numerous features include sweep mode, six waveform functions and an external counter.

- ***Six waveform functions*** – sine, triangle, square, ramp pulse.
- 0.5Hz ~ 3MHz frequency range.
- Internal/External counter function.
- 5 digit autorange counter display.
- Linear/Log sweep. Sweep rate 10mS ~ 5S.
- Amplitude 20V p-p/open, 10V p-p/50 ohm load.
- External counter trigger level control.
- VCF input 0 ~ 10V control frequency to 1000:1.

Part No.	Price
01FG32	$195.00

RSR 3MHZ SWEEP FUNCTION GENERATOR

MODEL FG-30

For applications where no display is needed, this model offers exceptional value and versatility including sweep mode and six waveform functions.

- ***Six waveform functions***: sine, triangle, square, ramp pulse.
- 0.5Hz ~ 3MHz frequency range.
- Linear/Log sweep. Sweep rate 10mS~5S.
- Amplitude 20V p-p/open, 10V p-p/50 ohm load.
- –20 dB attenuator

Part No.	Description	Price
01FG30	3 MHz Sweep Function Gen. (No Display)	$135.00

VIZATEK 20MHZ FUNCTION/SWEEP PROGRAMMABLE GENERATOR

DDS WITH ARBITRARY WAVEFORM

Full featured, menu driven direct digital synthesis (DDS) generator. Waveform changes can be made manually or via RS-232 interface.

- 20MHz range (sine only / square up to 5MHz)
- Internal AM, FM, PSK, FSK modulation
- Sweep range 0.1Hz to 20MHz

Part No. 01VZMFG2120 • Price: $595.00

RSR 10 MHZ SIGNAL GENERATOR

SINE AND SQUARE WAVE – *MODEL SG-10*

Design based on DDS technology. Microprocessor controlled for clean, accurate DC to 10MHz waveforms with frequency accuracy of 0.02% and 0.1Hz frequency resolution.

- Sine and Square waveforms
- **Range:** DC to 10 MHz, 0.1 Hz steps
- **Crystal Accuracy:** 50ppm
- **Sine Wave Output:** 5Vpp no load, variable amplitude control
- **Square Wave Output:** 5Vpp no load
- **Compact Size:** 3.8" x 5.7" x 1.5"

Part No. 01SG10 • Price: $98.00

GW INSTEK GFG 8200 SERIES FUNCTION GENERATOR

3 MHZ MODELS
GFG-8215A, GFG-8216A, GFG-8219A

5 MHZ MODELS
GFG-8250A, GFG-8255A

Model GFG-8250A

Model GFG-8255A

Model GFG-8219A

- **Frequency:** 7 ranges 0.3Hz ~ 3MHz (***GFG-8216A, GFG-8219A)***
- **Frequency**: 7 ranges 0.5Hz ~ 5MHz (***GFG-8250A and GFG-8255A)***
- **Waveforms**: sine, triangle, square, ramp, TTL, CMOS
- External voltage controlled frequency (VCF) function
- Duty cycle control with signal inversion capability
- Variable DC offset control
- Two-step (-20dB x 2) variable attenuator
- Built-in 6 digit counter with INT/EXT frequency counter function up to 150MHz
- Amplitude > 10Vpp (into 50 ohm load)

MODELS GFG-8219A AND GFG-8255A *are Sweep Function Generators also featuring:*

- LIN/LOG sweep mode
- INT/EXT AM/FM modulation
- GVC output for synchronization

Part No.	Description	Price
01GFG8215	3MHz (No Digital Display)	$175.00
01GFG8216	3MHz with 6 Digit INT/EXT Counter	235.00
01GFG8219	3MHz Sweep, Counter, AM/FM Modulation	310.00
01GFG8250	5MHz with 6 Digit INT/EXT Counter	265.00
01GFG8255	5MHz Sweep, Counter, AM/FM Modulation	379.00

GW INSTEK FUNCTION GENERATOR

2 MHZ

MODEL GFG 8020

- Large 0.5" LED display
- Coarse and fine tuning
- Sine, triangle, square, TTL pulse and CMOS outputs
- Built in 4 digit counter (Internal Only)
- Variable DC offset control
- Output overload protection

Part No. 01GFG8020 • Price $195.00

FUNCTION / SIGNAL GENERATORS

UNI

DDS FUNCTION GENERATORS

10 MHZ, MODEL DFG-1010
20 MHZ, MODEL DFG-1020

- Direct Digital Synthesis (DDS)
- 3.5 inch TFT LCD display
- 180Msa/s sampling. 10 bit vertical resolution
- 100MHz frequency counter
- RS232 interface
- FM, FSK, ASK, PSK modulation
- 32 standard or built in waveforms
- 40 save/recall panel settings
- 0.1% pulse duty cycle resolution
- Numeric keypad and rotary dial for input

Part No.	Description	Price
01DFG1010	10 MHZ DDS Function Generator	$390.00
01DFG1020	20 MHZ DDS Function Generator	525.00

Global Specialties

10 MHZ PULSE GENERATOR

MODEL 4010GBL

- Frequency range 0.1Hz ~ 10MHz.
- Fast rate-up to 10MHz.
- Variable pulse width and adjustable delay.
- Eight crystal derived accurate spot frequencies.
- Low rise and fall time <10ns.
- Internal and manual/external triggering.
- Normal and inverted output.
- Heavy duty metal case and adjustable handle.
- Three year warranty.

Part No. 01PG4010GBL • Price $350.00

BK PRECISION

10MHZ PULSE GENERATOR

MODEL 4030

A versatile signal source which combines four functions into one unit – waveform generation, pulse generation (through variable symmetry), frequency sweep operation and triggered operation. The 4030 offers low rise and fall time pulsed signals up to 10MHz, with a 4-Digit LED display

- 0.1Hz ~ 10MHz in 8 decade ranges
- 4-digit LED display
- Rise and fall time 10 S approx.
- Normal and inverting output
- Width: 50nS ~ 50mS (6 decade ranges & variable)
- Internal, external and manual triggering
- Eight crystal spot frequencies

Part No. 01PG4030 • Price: $395.00

RSR FUNCTION GENERATOR

SG-105 SIGNAL GENERATOR

A pocket-sized, low distortion sine-square wave generator, ideal for field technicians, students and hobbyists. Operates with a standard 9V battery.

Frequency Range:
x 1-20Hz to1.5KHz
x 100-2KHz to150 KHz
23 frequency steps
Output Control:
0 db, -20 db and fine adjust
Output Impedence:
600 ohms +10%

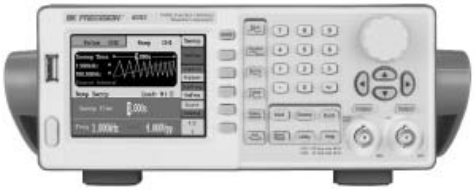
Output Voltage:
1.2 rms max. (no load)
Maximum Distortion:
200 Hz to 15KHz -0.05% (THD)
50 Hz to 30 HKz -0.1% (THD)
20Hz to 100HKz -0.5% (THD)

Part No.	1-9	10+
01SG105	$56.00	$51.50

BK PRECISION

DUAL CHANNEL ARBITRARY WAVEFORM GENERATORS

5 MHZ, 10 MHZ, 25 MHZ, AND 50 MHZ MODELS



- DUAL-CHANNEL Arbitrary waveform functions
- Four different bandwidth models
- Fully independent dual channel operation
- 14-bit, 125Msa/s, 16K point arb waveform generators
- Large, 3.5 inch color display with waveform preview
- USB device and host ports
- Optional GPIB interface and dedicated waveform keys
- Stable & precise sine, square, triangle and puls forms
- Numeric keypad, rotary control knob
- Complete with USB cable and instructional CD

Part No.	Description	Price
01BK4052	5 MHZ Dual Channel Arb Generator	$499.00
01BK4053	10 MHZ Dual Channel Arb Generator	599.00
01BK4054	25 MHZ Dual Channel Arb Generator	850.00
01BK4055	50 MHZ Dual Channel Arb Generator	1,050.00
	ACCESSORIES	
01BKAD40G	USB-to GPIB Adapter	200.00
01BKCC21	BNC Breakout-to-Alligator Clips	11.50
01BKCC510	General Purpose Function Generator Kit	169.00
01BKCC520	Deluxe Function Generator Kit	365.00
01BKTLFG	Function Generator Test Lead Set	82.00

FUNCTION / ARBITRARY GENERATOR / COUNTER

PC BASED

- **Output Freq:** 1Hz – 25MHz
- Output sine, square, ramp, AMFM, gauss noise, white noise or arbitrary wave
- Simulation of Real Word Signals or sensors
- USB interface, plug and play
- **Operating System**: Windows NT, XP, Vista
- **Max Amp** 3.5V max.
- **Frequency Counter:** DC to 50MHz

Part No. 01FAGC1 • Price: $190.00

GW INSTEK

MODULAR ARBITRARY GENERATOR

AFG-100/200 SERIES

- All models 1uHz ~25MHz with USB interface signal control
- Choice of 1 channel or 2 channel models
- AFG125P and AFG225P models feature built-in power supply with 2.5V, 3.3V, 5V @ 600mA
- 120 MSa/s, 10 bit resolution and arbitrary waveform editing function with 4K point memory
- AM, FM, PM, FSK, SUM(AFG-225/225P) modulation, sweep and burst functions

Part No.	Description	Price
01AFG125	1 CH 25 MHz Arb	$239.00
01AFG125P	1 CH 25 MHz Arb w/ power supply	264.00
01AFG225	2 CH 25 MHz Arb	309.00
01AFG225P	2 CH 25 MHz Arb w/ power supply	333.00

RIGOL FUNCTION / SWEEP / ARBITRARY GENERATOR

MODELS: DG1022A (25MHz); DG1032Z (30MHz); DG1062Z(60MHZ)

DG1022A

DG1032Z

These high quality waveform generators use advanced DDS technology. Output waveforms include: Sine, Square, Ramp, Triangle, Pulse, Noise, DC and Arbitrary. Output amplitude: 2.5mV to 10Vpp (10MHz); 2.5mV to 5Vpp (30MHz); 2.5mV to 2.5Vpp (60MHz)

- 2ch on all models
- Interface: USB, LAN, GPIB, RS232, USG Host to support USB flash, USB printer
- Built in pulse generator with adjustable width and edge.
- 200Msa/s sample rate, 16Mpts memory (DG1032Z, DG1062Z)
- **Modulation:** M, FM, PM, FSK, PWM
- **Sweep:** Linear or Log, Burst
- Digital Logic Output Module (optional): The first mixed signal
- generator (MSG) with 16 digital data channnels and 2 cloc
- channels
- **Power:** 100–240VAC, 45–440Hz, 50W
- **Dimensions & Weight:** ***DG1022A:*** 232x108x288mm; 6lbs ***DG1032Z, DG1062Z:*** 262 x 112 x 318mm; 7 lbs

Part No.	Description	Price
01DG1022A	25MHz Generator	$499.00
01DG1032Z	30MHz Generator	680.00
01DG1062Z	60MHz Generator	860.00

SIGLENT
SIGLENT TECHNOLOGIES

FUNCTION/ARB GENERATOR

5MHz/10MHz/25MHz/50MHz

Siglent Function/Arbitrary Waveform Generator are designed to deliver outstanding value and performance some key applications include IC test, simulate environment signals, electrical circuit function test, and education and training.

Key Features/Technical Specifications:

- Advanced DDS technology,125MSa/s sampling rate, 14bit vertical resolution
- 5 kinds of standard waveforms, built-in 46 kinds of arbitrary waveforms (including DC)
- Complete modulation functions: AM, DSB-AM,FM, PM, FSK, ASK, PWM, linear/logarithmic sweep and burst
- Innovative EasyPulse technology, can output pulse of low jitter, quick rising/falling edge
- Standard interfaces: USB Device, USB Host, support U-Disk storage and software update
- Provide 10 nonvolatile storage spaces for user's arbitrary waveforms
- Be capable of seamlessly connected to SIGLENT Digital Storage Oscilloscope
- Configurable with powerful arbitrary waveform editing software EasyWave

Part No.	Description	Price
01SDG805	5MHz, Single Channel	$248.00
01SDG810	10MHz, Single Channel	$282.00
01SDG830	30MHz, Single Channel	$332.00
01SDG1010	10MHz, Dual Channel	$329.00
01SDG1025	25MHz, Dual Channel	$409.00
01SDG1050	50MHz, Dual Channel	$509.00

GME TECHNOLOGY

FUNCTION GENERATOR 10MHZ/ 20MHZ

- DDS technology with microprocessor control for clean and accurate waveform
- Multiple output waveforms include sine, triangle, and square wave
- Numerical keypad for simple and accurate frequency setting up to 0.2Hz step
- 8-digit LCD frequency display
- Two BNC outputs for simultaneous square waveform and sine/triangle waveform output
- Built in flash memory for store/recall of up to 50 setup parameters (both frequency value and waveform type)
- Low battery indicator
- AC adaptor power source or standard 9V battery operation

FG2010/2020: Output 5Vp.p adjustable (sine & triangle)
5VP.p fixed (square wave)
FG3010/3020: Output 12Vp.p adjustable (sine & triangle)
5VP.p fixed (square wave)

Part No.	Description	Price
01FG2010	10MHz Generator	$169.90
01FG2020	20MHz Generator	259.90
01FG3010	10MHz Generator	188.90
01FG3020	20MHz Generator	279.90

BK PRECISION DDS FUNCTION GENERATORS

MODEL 4040B: 20MHZ
MODEL 4045B: 20MHZ WITH ARB FUNCTION

DDS (Direct Digital Synthesis) 20 MHz function generators with upgraded features including a full numeric keypad, large color screen and independent output and DC offset amplifiers. The 4045B model also includes a 12-bit, 50MSa/s, 1K memory Arbitrary Waveform capability.

4040B

4045B

- Arbitrary waveform function (Model 4045B)
- 20 MHz Sine / 20 MHz Square waveforms
- Menu-driven front panel keypad, rotary control knob
- Lin / log sweep, AM / FM mod, Burst mode, counter
- SCPI compatible USB interface
- 0.01 Hz ~ 20 MHz sine/square frequency range
- Color, LCD display

Part No.	Description	Price
01BK4040B	20MHz; DDS Generator	$550.00
01BK4045B	20MHz; DDS Generator with ARB Function	750.00

GW INSTEK ARB GENERATORS

Models AFG3051-50MHz, AFG3081-80Mhz

The AFG-3000 Series arbitrary waveform generators are designed for industrial, scientific research and educational applications. The series comes in bandwidths of 80MHz (AFG-3081) and 50MHz (AFG-3051) with built-in multiple standard waveforms to meet users' diversified needs.

The AFG-3000 Series provides a high 16 bit resolution,

200MSa/s sample rate and a 1M memory depth for editing arbitrary waveforms directly through the intuitive user interface. The Direct Waveform Reconstruction (DWR) function enables users to directly import waveforms from a GDS-2000 Series oscilloscope to the AFG-3000 via USB host, allowing users to edit waveforms and enhance measurement efficiency.

- Wide frequency range from 1uHz to 80/50MHz
- Store a total of ten different waveforms (each one up to 1M)
- High 200MSa/s sampling rate
- 16-bit Amplitude Resolution
- Output from any section of 1M-point-long waveforms
- AM/FM Mod, sweep, burst, FSK & PWM functions
- 4.3" high resolution LCD display/on-screen help/ Impedance switch
- USB, RS-232, GPIB interface support
- Four ways to generate arbitrary waveforms: Front Panel Operation

CSV file uploading, Direct Waveform Reconstruction (DWR), Arbitrary Waveform Editing PC Software

Part No.	Description	Price
01AFG3051	50MHz ARB Generator	$1,750.00
01AFG3081	80MHz ARB Generator	2,595.00

MINI DDS FUNCTION GENERATOR

Model: FG 085

- Generating continuous waveforms of Sine, Square, Triangle, Ramp (up and down), and Staircase (up and down)
- Generating servo test/control signals in micro-second resolution with user programmable pulse width, amplitude, and cycle
- Setting of frequency (or period), amplitude, and offset is done with digits - quick and straightforward
- Frequency (period), amplitude, and offset can be incrementally adjusted with rotary encoder
- Settings are memorized after power down.
- Can be used as an adjustable DC voltage source by setting amplitude to 0
- Dimensions: 6" x 2.2" x 12" Wt. : 4 oz

Part No. 01FG085 • Price $56.00

UNI SWEEP FUNCTION GENERATORS

2 MHZ, MODEL FG-8102
5 MHZ, MODEL FG-8105
10 MHZ, MODEL FG-8110

- Sweep Function Generators with Pulse Generator & Frequency Counter
- External / internal counter feature
- External / internal linear sweep
- Sine, square, triangle, TTL, ramp, pulse, saw tooth waveforms
- Variable output level control with 20dB attenuator

Part No.	Description	Price
01FG8102	2 MHz Sweep Function Generator	$259.00
01FG8105	5 MHz Sweep Function Generator	309.00
01FG8110	10 MHz Sweep Function generator	359.00

BK PRECISION 5 MHZ DDS FUNCTION GENERATOR

MODEL: 4005DDS

The B&K Precision model 4005DDS is a versatile 5 MHz DDS (direct digital synthesis) function generator with a 4-digit display. The instrument generates sinusoidal, triangular, and square waveforms over the 1 Hz to 5 MHz range at precise frequencies. The output voltage can be varied from 0 to 10 Vp-p into 50 ohms or to 20 Vp-p into open circuit. A continuously variable DC offset allows the output to be injected directly into circuits at the correct bias level.

- Frequency is selectable from 1 Hz to 5 MHz
- Sine, square, or triangle waveform output
- Direct digital synthesis (DDS) architecture
- Bright, easy-to-read LED display
- Number pad for quick input of frequency
- Front panel push button and pull knob can attenuate output by up to 40 dB Adjustable duty cycle and DC offset

Part No.	Description	Price
01BK4005DDS	Function Generator DDS 5MHz	**$299.00**

velleman THREE-IN-ONE LAB UNIT

This unique unit includes a digital oscilloscope, a digital function generator and a simple but easy-to-use power supply. The 3 units are electrically separated for ease of measurement. Measuring and testing just became easier and more affordable than ever!

SPECIFICATIONS:
- Oscilloscope 40MS/s:
- Bandwidth: up to 10 MHz (-3dB*)
- Input range: 1mV to 20V/division in 14 steps
- Input coupling: DC, AC and GND
- Real-time sample rate up to 40MS/s
- AD resolution: 8 bits
- Time base: 250ns to 1h per division
- Auto set-up function
- Probe x10 readout option
- Readouts: DC, AC+DC,True RMS, dBm, Vpp, Min-Max. (2.5%)
- Audio power measurement from 2 to 32 ohms
- Max. 100Vp AC+DC (input 600Vp using x10 probe)
- Standard 1M ohms 60MHz x1 - x10 probe (incl.)
- White LED backlight
- 1MHz function generator:
- DDS type generator (Direct Digital Synthesis)
- DAC resolution: 10 bits
- Frequency range: from 1Hz to 1.000.000Hz (0.01%)
- Frequency steps: 1Hz, 10Hz, 100Hz, 1kHz and 10kHz
- Waveforms: sine, square and triangle
- Sweep function with bi-direction option
- Output voltage: max. 15Vpp
- Real output level measurement: dBm / Vrms or Vpp readout (3%)
- Typical sine wave distortion (THD): < 0.1% @ 0dB / 600 ohms
- Square wave rise/fall time: typ. 0.2 s
- Output impedance: 50 ohms
- Multi-language menu (Eng / Fre / Dut / Ge / Es)
- White LED backlight
- Power supply:
- Voltage output (fixed voltages): 3V, 5V, 6V, 9V, 12V (5%)
- Peak output current: 1A
- LED Output overload & ON indicator
- Output ON/OFF switch

INCLUDES:
- LAB-2 unit
- Oscilloscope probe
- RCA adaptor
- Manual
- AC cord

*: -4dB at: 1mV, 2mV, 5mV, 0.1V and 2mV

Part No. 32VKLAB2 • Price: $239.00

UNI 4-IN-1 LAB TESTER

MODEL: US 9170A
FUNCTION GENERATOR, FREQUENCY COUNTER, POWER SUPPLY, DIGITAL MULTIMETER

- **DDS Function Generator:** 0.1-10MHz; sine, square, triangle, pulse, TTL outputs
- **Frequency Counter:** Ch A: 1 Hz-110 MHz; Ch B: 100 MHz - 2.7 GHz
- **DC Power Supply:** Adj volt output: 0-30V/0-3A & 3 fixed outputs: +/- 15V/1A, +5/2A
- **Digital Multimeter:** AC/DC -750/1000V; 20A 0.1 to 80M ohms, cap 1pf to 100uf, Temp -50 degrees C to 1372 degrees C RSR-232 interface
- **Size:** 15" x 12.5" x 6.6" ; wt. 30.2 lbs

Part No. 01UIUS9170A • Price: $925.00

RSR 4 – IN – 1 INSTRUMENT LAB BENCH SET-UP

MODEL RSR 4-IN-1

CONTAINS ALL FOLLOWING BENCH TYPE INSTRUMENTS:
- — Sweep Function Generator
- — Triple Output Power Supply
- — Digital Multimeter
- — Oscilloscope

FG-32

PHSY3002-3

DM9803R

GOS-620

GDS1052U

- Save time AND MONEY by ordering the 4-IN-1
- All quality, best selling models included
- Simplify your ordering process
- Analog and Digital Storage Scope versions available
- Customized packages available for ten or more units (add or substitute other models). Call for custom package quote *(10 + required)*

DETAILS ON INSTRUMENTS:

Sweep Function Generator – Model FG-32. Best value, top seller. 3MHz with digital display. Six waveform functions (sine, triangle, square, ramp, pulse). Internal/External frequency counter function

Triple Output Power Supply – Model PHSY3002-3. Best value, top seller. DC outputs are variable 0 ~ 30VDC @ 0 ~ 2 amps (two outputs), and a fixed 5V @ 3 amp.

Digital Multimeter – Model DM9803R. Best value, top seller. Bench DMM with large, 3 LCD display with back light and 42 segment bar graph. RS232 computer interface included with software and cable. DC, AC, Resistance, Capacitance, Frequency functions. AC or DC (battery) operation possible.

Oscilloscope – Model GOS-620 *(included with 01RSRANA4)*. Best value and top seller in its class. 20MHz, dual channel analog scope. High sensitivity with ALT trigger function

Oscilloscope – GW Instek Model GDS1052U *(included with 01RSRDIG4)*. 50MHz, 2 channel digital scope

Part No.	Description	Price
01RSRANA4	Four-In-One Bench Set-up w/20MHz Analog Scope	$750.00
01RSRDIG4	Four-In-One Bench Set-up w/50Mhz Digital Scope	735.00

Global Specialties FOUR-IN-ONE MULTI TESTER

FUNCTION GENERATOR, RF GENERATOR, POWER SUPPLY AND FREQUENCY COUNTER

MODEL 9004

- **Versatile** – four essential test equipment pieces packaged in one unit
- **RF Generator** – 100 KHz–110 MHz with AM/FM capability
- **Frequency Counter** – High sensitivity with 5 digit display. 100 MHz
- **Function Generator** – 1 Hz–1MHz
- **Power Supply** – 0–30 VDC, 0–2 Amp Variable
- 3 digit LED display for voltage or current. Current limit LED indicator

Part No. 01GL9004 • Price: $1,195.00

GW INSTEK ARBITRARY WAVEFORM GENERATOR

Model AFG-2225

BASIC LEVEL, DUAL CHANNEL MODEL

both channels equipped with same characteristics to fit dual signal apps such as differential or IQ signaling

- 25 MHz frequency bandwidth 1uHz resolution
- 120MS/s. 10 bit vertical resolution, 4K memory
- 10Vpp output amplitude
- Built -in waveforms (sine,square, ramp, noise)
- Built-in AM/FM/PM/FSK/SUM/Sweep/Burst and frequency counter
- 66 built-in (editable) waveforms
- USB device host and host interface for control and editing
- Adjustable duty cycle (1% ~ 99%)
- Independent or correlated configuration - couple, tracking or phase
- 3.5" LCD screen

Part No.	Description	Price
01AFG2225	Arb generator, dual channel	$549.00

BK PRECISION PROGRAMMABLE DDS FUNCTION GENERATORS

ARB MODELS: 4084AWG – 20MHZ; 4086AWG – 80MHZ
DDS MODELS: 4084 – 20MHZ; 4085 – 40MHZ; 4086 – 80MHZ; 4087 – 120MHZ

Lab grade synthesized function generators. 4084AWG AND 4086AWG offer arbitrary waveform capabilities. Direct digital synthesis (DDS) creates stable, accurate output signals for all 27 built-in standard and complex arbitrary waveforms. Create custom arbitrary waveforms with ARB models. High purity, low distortion sine and square waves. Extensive analog modulation including AM, FM, FSK, PSK, pulse, burst and lin/log sweep combined with multiple trigger modes. Software included with ARB models enables users to create and edit custom arb waveforms and easily download them to the instrument's non volatile memory.

- Clean and stable output of very small signals down to the 1mV – 10mV range (50 ohm)
- Support of internal and external modulation sources as well as internal, external and gated trigger sources
- ARB Models - create custom arbitrary waveforms with 10 bit vertical resolution, 16K memory and 200 MHz sample rate. Easily recreate waveforms originating from DSO's display or internal memory. (Models 4084AWG and 4086AWG)
- Adjust modulation parameters precisely over a wide range
- Fully programmable via RS232 using SCPI compatible commands
- 100MHz Universal Counter with frequency measurement and totalize function

Part No.	Description	Price
01BK4084AWG	20 MHz ARB function generator	$1,295.00
01BK4086AWG	80 MHz ARB function generator	1,895.00
01BK4084DDS	20MHz function generator	925.00
01BK4085DDS	40MHz function generator	1,150.00
01BK4086DDS	80MHz function generator	1,375.00
01BK4087DDS	120MHz function generator	1,650.00

GW INSTEK RF SIGNAL GENERATORS

USG SERIES

RF signal generators which are pocket-sized and USB compatible.

Five models to choose from with frequency ranges from 35 MHz to 4.4 GHz

- PC USB interface powered and controlled
- Pocket size – 30mm W x 103mm H x 30mm D
- Output power range: -30dBm ~ 0dBM
- Continuous wave signal without any modulation
- Support fixed frequency, frequency sweep, frequency hopping and power sweep mode
- 107dBc/Hz phase noise @ 100kHz offset
- Software supports different operating systems

Part No.	Description	Price
01USGLF44	35 MHz ~ 4.4 GHz RF generator	$ 495.00
01USG0103	100 MHz ~ 300 MHz RF generator	450.00
01USG0818	800 MHz ~ 1.8 GHz RF generator	450.00
01USG2030	2 GHz ~ 3 GHz RF generator	450.00
01USG3044	3 GHz ~ 4.4 GHz RF generator	450.00
01ADP0003	N female to SMA adapter 50 ohm	40.00

BK PRECISION 50MHZ PULSE GENERATORS

MODEL # 4033 (SINGLE CHANNEL)

High performance programmable pulse generator for testing digital systems. Generates clean and accurate pulses at up to 6 digits resolution.

3 YEAR WARRANTY

- Repetition rate of 0.1 Hz to 50 MHz
- Flexible trigger modes: Continuous, Triggered (int., ext., man.), Gated Burst and Ext. Width
- Pulse width programmable from 10 ns to 10 s
- Transition times variable from 6 ns to 25 ms
- Store up to 99 different test setups with auto retention of last power down setup
- 10 Vpp into 50 ohm output
- Programmable via GPIB and RS-232

MODEL # 4034 (DUAL CHANNEL)

- Both channels offer full functionality and all parameters such as pulse width and transition time can be set independently
- Synchronize both channels with the push of a button

3 YEAR WARRANTY

Part No.	Description	Price
01BK4033	Pulse Generator 50MhZ - Single Channel	$5,250.00
01BK4034	Pulse Generator 50MhZ - Dual Channel	$7,950.00

RSR RF SIGNAL GENERATOR

MODEL SG4160

- 100kHz to 150MHz on six bands
- Output to 450 MHz on harmonics
- AM modulation, Internal or External, 0% to 100%
- Frequency monitor output for external frequency counter
- Step and variable attenation to -40db

Part No. 01SG4160 • Price: $189.95

GW INSTEK

3GHz SPECTRUM ANALYZER

MODEL GSP-9300

GSP-9300 is a light, compact and high C/P ratio 3GHz spectrum analyzer. The GSP-9300 frequency range stretches from 9kHz to 3GHz and features many functions such as radio frequency and power measurement, 2FSK digital communications analysis, EMC pretest, and active component P1dB point measurement, etc. It can support the fast sweep speed up to 307us. It is the ideal instrument for various application fields such as the basic operation of R&D, research and school lecture, engineering maintenance and test for mass production.

This spectrum analyzer is suitable for automatic test systems and vehicle mounted operation. The GSP-9300 spectrum analyzer is very user-friendly. All frequently used functions can be applied quickly through function keys and five languages (English, Russian, Traditional Chinese, Simplified Chinese and Japanese) are available for user interface.

Features:

- Frequency Range: 9kHz ~ 3GHz
- High Frequency Stability: 0.025ppm
- 3dB RBW: 1Hz ~ 1MHz
- 6dB EMI Filter: 200Hz, 9kHz, 120kHz, 1MHz
- Phase Noise: -88dBc/Hz @1GHz, 10kHz Offset
- Built-in Measurement Functions: 2FSK Analysis, AM/FM/ASK/FSK Demodulation & Analysis, EMC Pre-test, P1dB point, Harmonic, Channel Power, N-dB bandwidth, OCBW, ACPR, SEM, TOI, CNR, CTB, CSO, Noise Marker, Frequency Counter, Time Domain Power, Gated Sweep
- Built-in Spectrogram and Topographic Display Modes
- 886MHz IF Output for User's Extended Applications
- Remote Control Interface: LAN, USB, RS-232, GPIB (Optional)
- Built-in Preamplifier, 50dB Attenuator, and Sequence Function
- Optional 6GHz Power Sensor, Tracking Generator, Battery Back
- Tracking Generator Options is Installed at Factory When Base Unit is Ordered.

Part No.	Description	Price
01GSP9300	3GHz, Spectrum Analyzer	$4,545.00
01GSPTG93	Tracking Generator	$1,450.00
Accessories		
01GSP9300BAT	DC Battery Pack	$240.00
01GSPPWS06	RF Power Sensor 6GHz	$2,915.00
01GSP9300GPIB	GPIB Interface	$300.00

GLOBAL SPECIALTIES

LOGIC ANALYZER PC BASED

32 CHANNEL WITH COMPUTER INTERFACE

Global Specialties Model GS-PCLA-32 is a 32 Channel, PC-Based Logic Analyzer. The logic analyzer is great for space savings and is easy on the budget. The GS-PCLA-32's graphic user interface is easy to use and allows users to instantly, and accurately measure signals with minimal instruction. Perfect for education, R&D and hobbyists.

Part # 01GSPCLA32 • Price: $640.00

RIGOL SPECTRUM ANALYZER

MODELS: DSA815/DSA832/DSA875

The DSA800 Series is a compact and light Spectrum Analyzer with premium performance for portable applications. The use of digital IF (intermediate frequency) technology guarantees reliability and performance to meet the most demanding RF applications.

The very large display (20.3 cm / 8") of the Rigol DSA815 Spectrum Analyzer with a resolution of 800x480pixels provides a very good overview over all its comfortable functions like Auto Tune, Auto Range, Auto Scale and Auto Couple. These functions enable the analyzer to acquire signals and match parameters automatically, instead of the manual process necessary with a traditional analyzer.

The Rigol Spectrum Analyzers have a sophisticated and easy to use user interface and offers multiple functions for all tasks. The menu navigation is very intuitional in use and all functions and parameters are easy to reach because of the graphical interface.

- **Frequency Range:** 9 kHz to 1.5 GHz/3.2GHz/7.5GHz
- Typical -135 dBm Displayed Average Noise Level (DANL)
- -80 dBc/Hz @10 kHz offset Phase Noise
- Total Amplitude Uncertainty <1.5 dB
- 100 Hz Minimum Resolution Bandwidth (RBW)
- Standard with Preamplifier and AM/PM Demodulation Function (DSA815 only)
- Tracking Generator available
- 8 inch (800x480 pixels) high definition display with clear, vivid, and easy to use graphical interface.
- Complete connevtivity with standard interfaces such as LAN, USB Host, USB Device, and GPIB (optional)
- Compact size, and light weight 4.25 kg (9.4lbs)

Part No.	Description	Price
01DSA815	1.5 GHz Model	$1,295.00
01DSA815TG	1.5 GHz w/ Tracking Generator	$1,495.00
01DSA832	3.2 GHz Model	$6,499.00
01DSA832TG	3.2 GHz w/ Tracking Generator	$8,098.00
01DSA875	7.5 GHz Model	$7,999.00
01DSA875TG	7.5 GHz w/ Tracking Generator	$9,598.00
	Options	
01PA-DSA832	Preamplifier for DSA832	$599.00
01PA-DSA875	Preamplifier for DSA875	$599.00
01TX1000	Demonstrator Board w/ Built in 1GHz Oscillator, mixer, filters & amp	$945.00
01RFATKIT	RF Alternator Kit-6db(1);10db(2)	$499.00
01RFADKIT	RF Adapter Kit, 9 diff adapters	$299.00
01AMK815	Adv. Measurements Kit for DSA815	$549.00
01EMI815	EMI Filter & Quasi Peak Detector	$659.00
01RMSA815	Rack Mounting Kit for DSA815	$374.00
01VB1020	800MHz to 2GHz VSWR Bridge including DSA800-VSWR Software License	$659.00
01VB1080	2GHz to 8GHz VSWR Bridge including DSA800-VSWR Software License	$699.00

GLOBAL SPECIALTIES LOGIC ANALYZER PC BASED

MODEL 3600
32 CHANNEL
WITH USB

Operates as a stand-alone unit or connect to computer via USB . Unit comes complete with all necessary software, data pods and logic grabbers.

- 32 iput channels in 4 groups with 8 channels for each group
- 4 groups may be combined in three different configurations
- Current limit and over voltage protection each channel name-definable
- Internal/external clock, data search, zoom, cursor, simulation, sequence adjusting and keyboard operation features.

Part # 01GLLA3600 • Price: $2,899.00

GW INSTEK PC BASED LOGIC ANALYZER

GLA-1000 SERIES

- A higher sample rate up to 200MSa/s – you get more detail and precision data
- Up to 1M points per channel, ultra memory size
- Up to x255 time compression rate
- Provide output signals for monitoring, synchronize, or control other device

SPECIFICATIONS

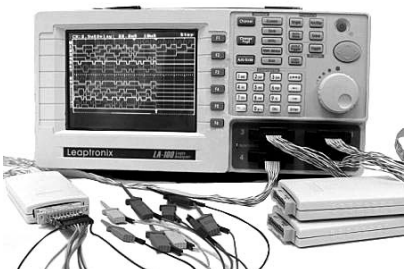
- Large memory size for all channels
  - — **GLA-1016:** 256 Kbits/per channel/4 Mbits memory size
  - — **GLA-1032:** 128 Kbits/per channel/4 Mbits memory size
  - — **GLA-1132:** 1Mbits/per channel/32 Mbits memory size
- **Power Interface:** USB 2.0 (1.1)
- **Operating Systems:** Win98/98SE/ME/2000/XP
- **Time/State Analysis:** Max 200MHz/0.001Hz–100MHz
- **Trigger Condition:** Edge / pattern
- **Input Voltage / Impedance:** 30V / 500 K Ohm / 10pF
- **Enable Condition**: Don't care, low, high
- **Data Compression Ratio:** Max 255
- **Data Protocal Analyzer:** 12C, RS-232C
- **Working Voltage:** 4.5V ~ 5.5V
- **Operating / Storage Temperature:** –0 C ~ 50 C / –40 C ~80 C
- **Dimensions / Weight:** 102 (D) x 39 (H) x 137 (W) mm/ approx. 340g.

Part No.	Description	Price
01GLA1016	16 Ch / 256 Kbits	$665.00
01GLA1032	32 Ch / 128 Kbits	1,290.00
01GLA1132	32 Ch / 1 Mbits	2,150.00

LOGIC ANALYZER PORTABLE

FEATURES:

- A portable small-sized analyzer
- Easy to use; makes debugging convenient
- Provides a PC-LINK interface to observe and print waveforms using your PC
- 5.6" color TFT display



SPECIFICATIONS

- 250MHz timing and 100MHz state analysis ***(LA2025)***
- 500MHz timing and 200MHz state analysis ***(LA2050)***
- **Saved Waveform:** 512K x 32 ***(LA2025)***
- **Saved Waveform:** 1M x 32 ***(LA2050)***
- **Memory:** 2M ***(LA2025)***, 4M ***(LA2050)***
- **Skew:** Typically less than 2.0 ns, maximum: 3.0 ns
- **Speed of scanning:** 5s/div – 14 ns/div
- **Trigger channel:** 32CH (8CHx4)
- **DPI:** 1 bit
- **Trigger signal:** 5ns
- **Various ways to collect data:** Single, Run, Autostore
- **Size:** 12.2 x 2.8 x 5.9 (inches)
- **Weight:** 5 lbs.
- **Power:** 90–240 VAC, 50–60 Hz
- **Package contents:** Unit; data pods (4); lead sets (4), test probe (36); AC cord; USB cable; CD and manual

Part No	Price
01LA2025	$1,850.00
01LA2050	2,695.00

PC-BASED LOGIC ANALYZER

This provides digital hardware and software designers to capture and analyze the intangible signals and able to measure the complex circuits precisely. Ideal solution for use at remote sites because of compact size and ability to connect via USB to PC. Power via USB cable.

SPECIFICATIONS

Timing: 100MHz ***(PLA1016)***; 250MHz ***(PLA2532)***
State: 100MHz
Bandwidth: 100MHz
Channels: 16 ***(PLA1016)***; 32 ***(PLA2532)***
RAM Size: 256K ***(PLA1016)***; 2M ***(PLA2532)***
Weight: 1 lb.
Includes: Unit; 1 or 2 lead set; USB cable; CD software

Part No	Price
01PLA1016	$485.00
01PLA2532	935.00

GW INSTEK 3 GHZ SPECTRUM ANALYZER

MODEL GSP830

- High resolution TFT color display
- USB and RS232 standard, GPIB interface optional
- Outstanding noise floor level (-117dBm @ 600MHz, 3K RBW) and extreme sensitivity for picking up weak signals
- Define own macros in 10 sequence sets while pause, repeat or single run mode can for selected for different applications
- Additional advanced features include auto set, split window, power measurements, pass/fail
- Some major options include tracking generator, battery pack, preamplifier. More listed below.

Part No.	Description	Price
01GSP830	3 GHZ Spectrum Analyzer	$4,100.00
01GSP830TG	With Tracking Generator	5,200.00
FACTORY INSTALLED OPTIONS AT TIME OF PURCHASE		
01OPT02BAT	Battery pack	400.00
01OPT03PPM	+/- 1 ppm Stability	330.00
01OPT04300	300Hz RBW	1,000.00
01OPT059120	9KHz and 120KHz RBW	1,000.00
01OPT0610100	10KHz and 100KHz RBW	1,000.00
01OPT07AMFM	AM/FM demodulator & 10KHz, 100KHz RBW	1,795.00
01OPT08GPIB	GPIB Interface	270.00
Note: only one of the RBW options can be selected		
ACCESSORIES		
01GSC001	Soft Carry Case	200.00
01GKT001	General Kit Set	295.00
01GKT002	CATV Kit Set	360.00
01GKT003	RLB Kit Set	240.00
01GSPANTAD	Antenna with adapter	40.00
01GAP801	Preamplifier	600.00
01GKT006	EMI Probe Kit Set	1,435.00
01GRA404	Rack Adapter Panel	229.00
01GSPCAB	3' RF Cable For External Equipment (N Male to N Male)	52.00
01GTL401	DC Jack to Lighter Plug Cord	36.50

RIGOL 3 GHZ SPECTRUM ANALYZER

MODEL DSA 1030 / 1030A

- **Range-** 9KHz – 3GHz
- **DANL:** -138 dBm (Model DSA 1030)
  -148 dBm (Model DSA 1030A)
- **Min RBW:** 100 Hz (Model DSA 1030)
  10 Hz (Model DSA 1030A)
- **Trigger Source:** Free Run, Video, External
- **Interfaces:** USB, LAN, GPIB (optional)
- **RF Input Max:** +30dBm
- **External Trigger:** 5VTTL
- **Dimensions:** 15.7 x 8.8 x 6.3"; wt: 13.7 lbs

Part No.	Description	Price
01DSA1030	Spectrum Analyzer 3.0 GHz	$3,999.00
01DSA1030-PA	Spectrum Analyzer with PreAmplifier	$4,999.00
01DSA1030-TG3	Spectrum Analyzer with Tracking Gen	$3,499.00
01DSA1030PATG3	Spectrum Analyzer with PreAmplifier & Tracking Gen	$5,498.00
01DSA1030A	Spectrum Analyzer 3.0 GHz	$4,999.00
01DSA1030ATG3	Spectrum Analyzer with Tracking Gen	$5,998.00

GW INSTEK RF COMMUNICATION TRAINING COMBO

3 GHZ SPECTRUM ANALYZER AND BASEBAND SIGNAL / RF CARRIER SIGNAL MODULE MODEL GSP-730 SPECTRUM ANALYZER 3 GHZ MODEL GRF-1300 TRAINING MODULE FOR USE WITH GSP-730

An affordable, but full function spectrum analyzer and a specially (designed for education) training module. Together with a PC an instructor may present a fundamental RF Communication Course via Powerpoint, and control experiments (which come with the trainer), simultaneously. A VGA output enables images to be transferred to a projector, or larger screen display.

GSP-730 Spectrum Analyzer

- Frequency Range: 150KHz ~ 3GHz
- Autoset funtion
- RBW ranges, 30KHz, 100KHz, 300KHz, 1MHz
- ACPR/CHPW/OCBW measurement
- Built in limit line, 5 markers, split window function
- 3 different trace colors, 5.6" TFT LCD display
- USB and RS232, and VGA output

GRF-1300 Training Module for use with Spectrum Analyzer

- Baseband Signal: sine, triangle, square. Frequency range: 0.1 ~ 3MHz
- RF frequency: 870 ~ 920MHz
- AM/FM modulation
- 5 programmable on/off switches and 5 test points to simulate 8 failure conditions for trouble shooting
- USB enables remote control
- 10 experiments included

Part No.	Description	Price
01GSP730	3 GHz Spectrum Analyzer	$899.00
01GRF1300	Training Module for use with GSP-730	359.00

BK PRECISION SPECTRUM ANALYZER

3.3GHZ/8.5GHZ – HANDHELD

MODELS 2650A / 2652A / 2658A

A compact, light weight and cost-effective spectrum analyzer for quick and precise signal investigations, especially away from the bench. At a weight of only 4 pounds (1.8 kg), is by far the lightest full-featured spectrum analyzer available, yet it delivers performance and features comparable to a full-size bench spectrum analyzer and can operate up to 4 hours on a single battery. With its ease of use, measurement flexibility and unmatched portability, spectrum analyzer is an indispensible tool for engineers and technicians who conduct field measurements in the 50 kHz to 3.3 GHz range.

- **Range**: 50KHz – 3.3GHz ***(Models 2650A and 2652A)***
- **Range:** 50KHz – 8.5GHZ ***(Model 2658A)***
- ***Model 2652A*** is the same as ***2650A*** but with tracking generator
- Impressive 4 hour battery life; easy-to-replace rechargeable Lithium-Ion battery
- Fast sweep speed, minimum 10 ms, to help locate and identify elusive, transient interference signals
- DANL (displayed average noise level) of -127 dBm
- Large easy-to-read color display, 640 x 480 resolution
- Measurement functions: channel/adjacent channel power, occupied bandwidth, electric and magnetic field strength
- Convenient Auto tune function
- PC Software for remote control and documentation of measurement results *(included)*
- Conveniently store measurement results and screen shots in bitmap format to USB flash drive

Part No.	Description	Price
01BK2650A	Spectrum Analyzer 3.3GHz	$6,450.00
01BK2652A	Spectrum Analyzer 3.3 GHz With Tracking Generator	8,450.00
01BK2658A	Spectrum Analyzer 8.5 GHz	10,995.00

Please Call For Pricing on Additional Accessories

SPECTRUM ANALYZERS

MODEL LPT6000 – 6.2 GHZ

MODEL LPT3000 – 3.0 GHZ

LPT-6000

Fully synthesized RF spectrum analyzers featuring simple user controls which allow the novice or the seasoned expert to operate right out of the box. Powerful RF test and measurement tools for CDMA and WCDMA RF systems, broadcast RF systems, EMI/EMC. Features include 6.4" color display, centronics printer port, internal memory, USB host, built in DDMA measurement, (ACP, Channel Power and Occupied Bandwidth).

- Superior resolution: minimum 1 Hz; Digitally synthesized RF system
- Frequency range: 9 kHz ~ 3.0 GHz and 9 kHz ~ 6.2 GHz models
- Input levels: 105 dBm to + 20 dBm
- 6.4" color TFT LCD display. Marker Modes: Peak Search, Delta Marker, Marker to Center, Market to Reference (8 markers max.)
- CDMA measurement
- Multiple type interfaces, with GPIB option
- Application: consumer wireless remotes, microphones, monitors. Bluetooth radio. Industrial, scientific, medical, cellular and PCS, CDMA and WCDMA RF systems. Two-way radio trunk radio. Paging. Commercial broadcasting. Field service and installation. Point-to-point microwave. Public utilities, railroads
- **Weight:** approx 22 lbs.

Part No.	Description	Price
01SA6000	6.2 GHz spectrum analyzer	$6,950.00
01SA3000	3.0 GHz spectrum analyzer	4,510.00
01TKG3000	Factory installed tracking generator	1,500.00
01REM3000	Remote control software	225.00

SPECTRUM ANALYZER

DIGITALLY SYNTHESIZED, NUMEROUS FEATURES

***MODEL LPT2250* – 1.15 GHZ**

Fully synthesized RF spectrum analyzer. User friendly controls. On-screen markers with absolute and relative signal levels for easy measuring. Optional tracking generator for stimulus/response analysis, RF power meter, AM/FM receiver for listening to demodulated signals and remote control for PC control and acquisition.

- Over 1GHz frequency range over a 120 dB range of input level.
- Display span selectable from 0 KHz to 100MHz per division (full span) in standard 2-5-10 step sequence.
- Resolution bandwidth changes automatically as span is changed. 3 KHz, 30KHz, 220KHz, and 4 MHz standard.
- Top of the screen reference level selectable –30dBm to +20dBm adjusts signal for convenient display position.
- Two markers displayed on trace waveform for ease of measurement. Markers may be positioned. Frequency and level of these points digitally displayed. Delta marker mode displays difference between markers for simple, fast and accurate relative measurements.
- Digitally synthesized RF system for accuracy and stability. Span and sweep directly based on internal timebase for frequency accuracy at each point along sweep.
- **Any factory installed options selected must be done with initial order and cannot be added later.**

Part No.	Description	Price
01LPT2250	1.15 GHz Spectrum Analyzer	$2,395.00
01TKG2250	Tracking Generator	714.00
01PWR2250	Power Meter Option	694.00
01HSO2250	High Stability Oscillator	200.00
01RCV2250	AM/FM Receiver	224.00
01REM2250	Remote Control	194.00
ALL ABOVE OPTIONS FACTORY INSTALLED ONLY		
01P20A	3 GHz RF Probe	239.00
01A26-8016	BNC Female to "N" Male Adapter	4.50

Global® Specialties

FOUR-IN-ONE MULTI TESTER

FUNCTION GENERATOR, RF GENERATOR, POWER SUPPLY AND FREQUENCY COUNTER

MODEL 9004

- **Versatile** – four essential test equipment pieces packaged in one unit
- **RF Generator** – 100 KHz–110 MHz with AM/FM capability
- **Frequency Counter** – High sensitivity with 5 digit display. 100 MHz
- **Function Generator** – 1 Hz–1MHz
- **Power Supply** – 0–30 VDC, 0–2 Amp Variable
- 3 digit LED display for voltage or current. Current limit LED indicator

Part No. 01GL9004 • Price: $1,195.00

RSR

2.5 GHz FREQUENCY COUNTER

MODEL FC-2500

- Handheld instrument ideal for the VHF and UHF frequencies.
- 3 ranges 2500 MHz, 500 MHz, 10 MHz.
- 8 digit LCD display.
- Frequency, period, data hold, max, min, average.
- Best resolution 0.1Hz with 50mV sensitivity.
- Battery operation or AC power. *Battery included.*
- *Optional: Antenna with BNC connector*

Part No.	Description	Price
01FC2500	Frequency Counter	$155.00
01AT20	Antenna w/BNC	6.95
16DFC9	Adaptor 9V DC	6.50

GW INSTEK

FREQUENCY COUNTER

MODEL FC-8010

- **Range:** 120MHz
- **Accuracy:** 1Digit + Time Base Accuracy
- **Max. Input:** 5 Vrms for 50 ohm, 150 Vrms for 1M ohm
- **Impedance:** 1M ohm, 35 pF
- 8 Digit Display

This instrument can measure frequency from 1 Hz to 120 MHz in 2 ranges. It has an 8 digit display and overflow indicators. Gate time is switch selectable from 0.1 second to 10 seconds.

Part No. 01FC8010 • Price: $185.00

GW INSTEK

FREQUENCY COUNTERS

MODEL GFC-8131H (1.3 GHZ)
MODEL GFC-8270H (2.7 GHZ)

- Frequency, period and RPM
- High resolution at both low and high
- 10mV RMS high sensitivity
- 10nHz resolution for 1 Hz
- Self diagnostic
- Variable trigger level control
- Display hold function

GFC-8270 Model special order; 8-12 week delivery.

Part No.	Description	Price
01FC8131	1.3GHz Model	$275.00
01FC8270	2.7GHz Model	355.00

RSR

2.5 GHz FREQUENCY COUNTER

MODEL FC 150 (150 MHZ)
MODEL FC 7150 (1.5GHZ)

FC-150

- 0.1 Hz ~ 150 MHz in A, B input
  50 MHz ~ 1.5 GHz in C input (***Model 7150 Only***)
- Period, total and RPM measurement for input A
- 9 digit display with 0.01 MHz resolution
- High sensitivity external reference input function (≥ 20 mVrms)
- Push scanning, low pass filter, AC/DC coupling, data hold and self test function

Part No.	Price
01FC150 (150 MHz)	$219.00
01FC7150 (1.5 GHz)	335.00

RSR

FREQUENCY COUNTER 1.3 GHZ

LED DISPLAY 8 DIGIT

MODEL MS6100

FEATURES:

- Four measuring modes: frequency, period, totalize and self check
- 10MHz OSC out
- Dual voltage supply 110VAC / 220VAC

SPECIFICATIONS:

Frequency: Channel A: 10Hz – 100MHz
Channel B: 100MHz – 1.3GHz
Period: 0.1S to 0.1 S
Totalize: 10Hz to 10MHz (1 count resolution)
Dimension: 9.5" x 2.8" x 11.5"
Weight: ~ 4 lbs.

Part No. 01FCMS6100 • Price: $155.00

RSR

2.7 GHz FREQUENCY COUNTER

MODEL FC-2700

- 2.7 GHz bench type frequency counter.
- High sensitivity for VHF and UHF frequency measurement. Useful for CB bandwith.
- Frequency, period, data hold, relative measurement, max, min, average.
- 8 digit LCD display.
- Power supply from battery or AC adapter *(Optional).*
- RS232 serial interface.
- TCXO temperature compensated crystal oscillator time base for high stability and accuracy.

Part No.	Description	Price
01FC2700	Frequency Counter	$260.00
01A26-8016	BNC Female to "N" Male Adapter	4.50
01NN23	Probe with Double “N” Coaxial Connector	19.50
16DFC9	Adaptor 9V DC	6.50

BK PRECISION

FREQUENCY COUNTER 3.5GHZ

MODEL 1856D

- Portable instrument for field use
- Wide measuring range from 3.5GHz
- Bright 9-digit LED display
- High sensitivity for VHF and UHF frequencies
- Period mode for accurage low frequency measurements
- Totalize mode permits counting of individual events
- Accurate TCXO timebase

Part No.	Description	Price
01FC1856	3.5 GHz Frequency Counter	$540.00

UNI

3.7 GHz FREQUENCY COUNTER
MODEL FC-8300

- Ranges: 0.1Hz ~ 150MHz in A input;
  80MHz ~ 3.7GHz in C input
- Period and total measurement input A
- 9 digit display with 0.01MHz resolution
- RS232 interface
- High resolution at low frequencies
- High sensitivity external reference function
- Extensive self-check function

Part No.	Description	Price
01FC8300	3.7 GHZ Frequency Counter	$385.00

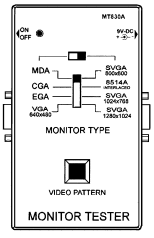
TRIPLETT

SatAlign
DIGITAL SATELLITE SIGNAL STRENGTH METER

- Dish installment or realignment.
- Analog metering for easier readouts.
- 950MHz ~ 2050MHz frequency range.
- High input sensitivity.
- Built in integrator for broad band scanning.
- LED for left hand (18V) or right hand (13V) polarization.
- Powered by receiver or external source *(not included).*

Part No. 01SATALIGN • Price $42.00

COMPUTER MONITOR TESTER
CHECK MONITORS WITHOUT A COMPUTER!!
MODEL MT830A



The portable computer monitor tester can quickly and easily troubleshoot, test and align computer monitors.

- **Test:** MDA, CGA, EGA, VGA (640 x 480), SVGA (800 x 600), 8514A (Interlaced), SVGA (1024 x 768), and High Resolution (1280 x 1024) Monitors
- **Video Patterns:** Color Bars, Cross Hatch, Dots, Color Raster and Windows.
- **Two Video connectors:** Digital/TTL 9-D and Analog 15-HD
- Powered by a 9V Battery or an External AC Adaptor
- **Dimensions:** 3.8"W x 5.7"H x 1.5"D

Part No.	Description	Price
041MT830	Computer Monitor Tester	$120.00
16D8-1	Adapter 9V	5.95

BK PRECISION

2.4GHZ UNIVERSAL FREQUENCY COUNTER
WITH RATIO FUNCTION AND RS232 INTERFACE

The ***Model 1823A*** is a reciprocal 2.4GHz universal frequency counter that is microprocessor controlled. The LED display can provide eight digits of resolution using the internal 10S gate time. The high accuracy, sensitivity and versatility of this counter make it an extremely valuable instrument to scientists, engineers, experimenters and communications technicians.

- 0.1Hz ~ 2.4GHz range
- 1PPM Time base stability
- Trigger function
- Frequency ratio measurement function
- Time interval measurement function
- External frequency standard input
- Bright LED display
- Attenuator
- Period
- Total
- Low pass filter
- Line filter
- RS232 Interface
- Data hold, remote start-stop, self test

Part No. 01FC1823 • Price: $470.00

UNIVERSAL COUNTER
MODEL FC 150U (150 MHZ)
MODEL FC 7150U (1.5GHZ)

FC-150U

FC-7150U

- 0.1Hz ~ 150 MHz in A, B input
  50 MHz ~ 1.5 GHz in C input (***Model FC7150U Only***)
- Trigger level adjustment for input A
- Separate and common mode selectable for input A and B
- Period and total measurement for input A
- Time interval and ratio measurement for input A and B
- Slope mode selectable for input A and B
- 9 digit display with 0.01MHz resolution
- High sensitivity external reference input function (≥ 20 mVrms)
- Self check function, push-scanning, low pass filter, AC/DC coupling and data hold function

Part No.	Price
01FC150U (150 MHz)	$269.00
01FC7150U (1.5 GHz)	360.00

FUNCTION / ARBITRARY GENERATOR / COUNTER
PC BASED

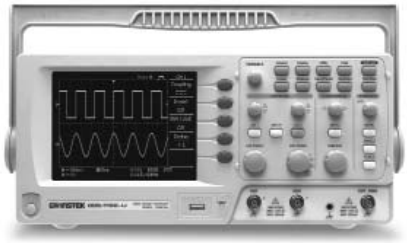
- **Output Freq:** 1Hz – 25MHz
- Output sine, square, ramp, AMFM, gauss noise, white noise or arbitrary wave
- Simulation of Real Word Signals or sensors
- USB interface, plug and play
- **Operating System**: Windows NT, XP, Vista
- **Max Amp** 3.5V max.
- **Frequency Counter:** DC to 50MHz

Part No. 01FAGC1 • Price: $190.00

GW INSTEK DIGITAL STORAGE SCOPES

GDS1000-U SERIES & GDS1000A-U SERIES

The INSTEK 1000-U and 1000A-U series DSO's are the most economic scopes to date while at the same time offer higher bandwidths, better sampling rates and advanced features such as GO-NO-GO testing, FFT and Data Logging capability. Freewave software included (download). All models are two channel scopes.



1000-U series:

- 50MHz
- 250MSa/s real time sampling rate.
- 25GSa/s equivalent-time
- 4K record length
- USB port for PC connection
- Go-No-Go, Data Logging & FFT
- 19 automatic measurements
- 5.7" color TFT LCD display
- Peak detect as fast as lOns
- Save/Recall 15 front panel settings & waveforms

1000A-U series:

- 70MHz, 100MHz, 150MHz models
- 1GSa/s real time sampling rate.
- 25GSa/s equivalent-time record length
- 2mV- lOV vertical scale
- USB host and device interface supported
- Go-No-Go, Data Logging and ZOOM FFT
- Up to 27 automatic measurements
- 5.7" TFT LCD display

Part No.	Description	Each
01GDS1052U	Model 1052U 50MHz	**$299.00**
01OSA1072AU	Model 1072AU 70MHz	**399.00**
01OSA1102AU	Model 1102AU 100MHz	**399.95**
01OSA1152AU	Model 1152AU 150MHz	**599.00**

SIGLENT DIGITAL OSCILLOSCOPE

2ch; 50MHz/70MHz/100MHz

SDS Series digital storage oscilloscopes are of the highest quality and provide reliable performance. Some key applications include electronic circuit design and debugging, electrical circuit function test, industrial control and measuring, and education and training.

Key technical specifications and features:

- 50 MHz to 200 MHz bandwidth
- 500 MSA/s ~1 GSA/s sampling rate
- 7 inches color TFT-LCD display
- 6 digits hardware frequency counter
- Waveform record and play back function
- Unique digital filter and data recorder function
- Embedded 12 languages, online help, one key storing, and one key printing
- Interface: USB device, USB host, RS-232, PASS/FAIL
- Support USB-TMC protocol and SCPI programming command control
- 32kpts to 2Mpts memory depth
- Accessories: 2 x Probe, 1 x Quick Start, 1 x Power Cord, 1 x USB Cable

Part No.	Description	Price
01SDS1052DL	50MHz; 500MSA/s; 32kpts	$279.00
01SDS1072CML	70MHz; 1GSA/s; 2Mpts	$322.00
01SDS1102CML	100MHz; 1GSA/s; 2Mpts	$359.00

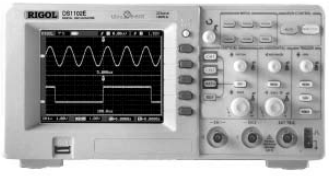
RIGOL OSCILLOSCOPE

DIGITAL STORAGE

50MHZ, 100MHZ

DUAL CHANNEL WITH LOGIC ANALYZER MODULE

MODELS DS1052 / DS1102



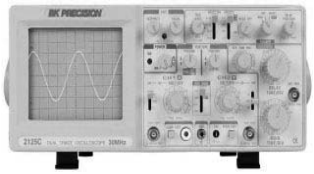
- True mixed signal oscilloscope with 16 channels of digital acquisition
- 5.7" 64K TFT color, vivid display
- 1GS/s Msa/s real-time sample
- Built-in USB host to support USB flash memory, USB printers and direct system upgrades
- Advanced trigger modes includes edge, video, slope, alternate, pulse width, pattern
- 1M of memory (512K points dual channels)
- **Power:** 100-240V / 50VA max

Part No.	Description	Price
01DS1052E	50MHz Scope	329.00
01DS1102E	100MHz Scope	399.00
01DS1052LCD	50MHz Scope w/Logic Analyzer	649.00
01DS1102LCD	100MHz Scope w/Logic Analyzer	719.00

OSCILLOSCOPES

BK PRECISION 2 CHANNEL, DUAL TRACE ANALOG OSCILLOSCOPES

Model 2120C - 30 Mhz
Model 2121C – 30Mhz with built-in Frequency Counter
Model 2125C – 30Mhz with Component Tester
Model 2160C – 60Mhz with Component Tester



- **Features:**
- 8 x 10 cm CRT. Models 2125C & 2160C equipped with variable scale illumination, and built-in COMPONENT TESTER
- Model 2121C features built-in 50MHz FREQUENCY COUNTER
- Dual trace all models for displaying two waveforms simultaneously, selectable single trace if desired. Alternate or chop sweep selectable at all sweep rates
- 5 mV/div sensitivity full bandwidth. High sensitivity 1mV/div and 2 mV/div using PULL x5 gain control
- Sweep features: Calibrated time measurements. 23 ranges. X10 sweep magnification for close examination of waveforms
- Dual time base features Models 2125C & 2160C

Part No.	Description	Price
01BK2120C	30 MHz analog scope	619.00
01BK2121C	30 MHz analog scope with frequency counter	659.00
01BK2125C	30 MHz analog scope with component tester	675.00
01BK2160C	60 MHz analog scope with component tester	1,119.00

VIZATEK 20MHZ OSCILLOSCOPE

Best Value!

- 20MHz
- Dual or single channel
- High sensitivity 1Mv/Div
- Z axis input
- 10 times sweep magnification
- Reliable, light electronic encoder
- ALT triggering, triggering level lock, auto sync. functions
- Optional Frequency Counter added at extra cost

Part No.	Description	Price
01OSM2620FG	20MHz with Freq. Counter	$340.00

GW INSTEK 30 MHZ OSCILLOSCOPE WITH FREQUENCY COUNTER

MODEL GOS-630FC

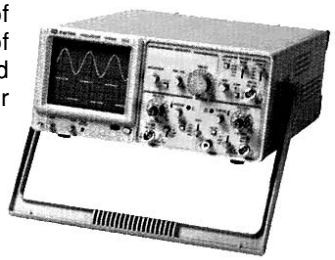
- 30 MHz analog 2 channel scope
- Internal 5 digit counter for easy frequency measurements
- High vertical sensitivity up to 1mV/div for capturing small signals
- LCD readout display shows vertical/horizontal settings and input signal frequency
- Auto time-base function to auto select appropriate horizontal time base
- Buzzer alarm alerts users when vert/hor setting reaches max or min
- High performance scope with features rarely available within this class

Part No. 01GOS630FC • Price: $425.00

GW INSTEK 20MHZ OSCILLOSCOPE

MODEL GOS-620

Bandwidth to meet many school lab requirements, and priced to stretch budgets. This high quality scope is the economy version of the GOS-622G, offering many of the same features. Probes and manual are included (with all our bench model scopes).



- 20MHz, dual channel
- High sensitivity 1mV/DIV
- Channel 1 output 20mv/DIV
- TV synchronization
- Z axis input
- ALT triggering function
- X5 magnification DC ~ 7MHz
- Horizontal sweep 0.2 s ~ 0.5s/DIV
- AC trigger coupling
- XY bandwidth DC ~ 500KHz

Part No. 01OS620 • Price: $395.00

GW INSTEK 20 MHZ OSCILLOSCOPE

MODEL 622G

- 20 MHz dual channel
- High sensitivity, 1mV/DIV
- CH1 output
- TV synchronization
- Z axis input
- ALT triggering function
- Hold Off function
- Trigger level lock function

Part No. 01OS622G • Price: $440.00

GW INSTEK 20 MHZ OSCILLOSCOPE W/FUNCTION GENERATOR

MODEL GOS-620FG

- Built-in 1 MHz Function Generator
- 20MHz, Dual Channel
- High sensitivity 1mV/DIV
- TV Synchronization
- Z axis input
- ALT Triggering Function
- CH1 output
- Economic Choice for High Quality
- Dimensions and Weight – 12" x 6" x 19"; 20 lbs.

Part No. 01OS620FG • Price $495.00

GW INSTEK

DIGITAL STORAGE SCOPES

GDS2000E SERIES

2CH/4CH; 7MHz to 200MHz

- 70MHz, 100MHz, 200MHz models – either 2 or 4 channel
- rapid refresh. waveform update rate 120,000 wfm/s
- 1Gsa/s real-time sampling rate each channel (2 ch models)
- 1Gsa/s max real-time sample rate (each channel)
- 10M memory depth (selectable based on speed needs)
- VPO waveform display technology
- 8" WVGA TFT LCD display
- FFT, hi-lo functions, segmented memory / waveform search
- data log up to 100 hrs, trigger and decode functions
- remote internet storage, multi language menu

Part No.	Description	Price
01INSTK2072E	70MHz 2 channel DSO	$ 670.00
01INSTK2074E	70MHz 4 channel DSO	$ 1,150.00
01INSTK2102E	100MHz 2 channel DSO	$ 920.00
01INSTK2104E	100MHz 4 channel DSO	$ 1,530.00
01INSTK2202E	200MHz 2 channel DSO	$ 1,300.00
01INSTK2204E	200MHz 4 channel DSO	$ 1,570.00

BK PRECISION

DIGITAL SCOPES WITH BUILT IN ARB GENERATOR OPTION

MODEL 2540B - 60MHZ DSO
MODEL 2542B - 100MHZ DSO

MODEL 2540B-GEN - 60MHZ WITH 20MHZ BUILT-IN ARB GENERATOR

MODEL 2542B-GEN - 100MHZ WITH 40MHZ BUILT-IN ARB GENERATOR

Features:

- Dual Channel, PC Software, front panel USB port
- Educators: Ability to disable, auto-set button
- FFT + (3) additional math functions
- 28 automatic measurements
- Digital filtering, waveform recorder, pass/fail limit testing
- Arb models feature AM/FM, FSK, PSK, PWM, save up to 10 user-defined waveforms. Sweep and Burst mode.

Part No.	Description	Price
01BK2540B	60 MHz DSO	$779.00
01BK2542B	100 MHz DSO	899.00
01BK2540B-GEN	60 MHz DSO w/ 20MHz Arb Generator	1,195.00
01BK2542B-GEN	100 MHz DSO w/ 40MHz Arb Generator	1,395.00

OWON DIGITAL STORAGE OSCILLOSCOPE

SDS5032

SDS6062/SDS7012

30MHZ/60MHZ/100MHZ

2 CHANNEL WITH LAN & VGA PORTS

- 8 inch TF 65K Color LCD with 800x600 pixel resolution
- USB, LAN & VGA interface
- Includes 2 probes, power cable, USB cable & CD with software
- Dimensions: 14" x 3" x 7"; wt: 5 lbs

Part No.	Description	Price
01SDS5032E	30 MHz DSO, 250Ms/s with 10K points memory on each channel.	$295
01SDS6026	60 MHz DSO, 500Ms/s with 10M points memory	$380
01SDS7102	100 MHz DSO, 1Gs/s with 10M points memory	$490

SIGLENT
SIGLENT TECHNOLOGIES

DIGITAL OSCILLOSCOPES

SPO TECHNOLOGY

2CH/4CH; 70MHz TO 300MHz

This series of oscilloscopes employ SPO technology (Super Phosphor Oscilloscope). This allows waveform capture rate of up to 110,000 waveforms per second.

LOGIC ANALYZER BOARD (OPTIONAL) AVAILABLE

- Analog channel bandwidth 70MHz, 100MHz, 200MHz, 300MHz
- Maz Sample Rate: 2GSa/s
- 8 " TFT (800 * 480) LCD screen
- Inovative SPO technology
- Long Memory Depth up to 28Mpts
- Advanced Math operations (FFT, integral, differential, square root)
- Building waveform generator with a max frequentie of 25MH
- Real-time sampling rate of the analog channels 2GSa / s, digital channel 500MSa / s (MSO function)
- Built-in 25MHz function arbitrary waveform generator (optional)
- support rich serial bus triggering and decoding functions (IIC, SPI, UART / RS232, CAN, LIN)
- Support Smart Trigger (Window, Runt, Interval, DropOut, Pattern) and high-definition HDTV video triggering
- Zoom done by hardware implementation and high-speed Pass / Fail function
- 32 kinds of automatic measurement functions, statistical functions to support measurement
- Advanced Math functions (FFT, integral, differential, square root)
- Interface: USB Host, USB Device (USBTMC, PictBridge), LAN (VXI-11, LXI-C), EXT TRIG, PASS / FAIL, TRIG OUT
- support rich SCPI remote control commands
- Multi-language display and embedded online help system

Part No.	Description	Price
01SDS2072	2ch; 70MHz Scope	$805.00
01SDS2074	4ch; 70MHz Scope	$1,168.00
01SDS2102	2ch; 100MHz Scope	$1,028.00
01SDS2104	4ch; 100MHz Scope	$1,489.00
01SDS2202	2ch; 200MHz Scope	$1,449.00
01SDS2204	4ch; 200MHz Scope	$1,988.00
01SDS2302	2ch; 300MHz Scope	$1,998.00
01SDS2304	4ch; 300MHz Scope	$2,558.00
	Options	
01SDS2000FG	25MHz Function/Arb Option	$188.00
01SDS2000PA	Power Analysis Option	$318.00
01SDS2000LA	Logic Analyzer Option (8bits)	$299.00
01SDS2000DC	IIC, SPI, UART/RS232, CAN, LIN Decoding Option	$188.00

BK PRECISION DIGITAL STORAGE OSCILLOSCOPES

70 MHZ / 100 MHZ / 200 MHZ / 300 MHZ / 2 CH. / 4 CH.

MODELS 2553, 2555, 2557

MODELS 2552, 2554, 2556, 2558

MODEL 2559

The 2550 Series digital storage oscilloscopes deliver performance and value in 2-channel and 4-channel configurations. With bandwidth from 70 MHz to 300 MHz and 2 GSa/s sample rates, these oscilloscopes offer 24 kpts/Ch waveform memory, 32 automatic measurements, and advanced triggering capabilities including math functions. TFT display offers a significantly larger viewing area than typical economy oscilloscopes.

STANDARD FEATURES:

- Bandwidth up to 300 MHz
- 2 GSa/s sample rate
- 4-channel acquisition (2553, 2555, 2557, 2559)
- Large 7" widescreen color display
- 32 automatic measurements
- FFT plus four additional math functions
- Built-in context sensitive help system
- PC software that lets you remotely control the oscilloscope and capture, save, and analyze waveform data
- Front and rear panel USB host port for convenient storing and recalling of waveform data, setups, and screenshots on a USB flash drive
- Standard LAN (supports SCPI) and USB device port (USBTMC compliant) for remote PC control

Part No.	Description	Price
01BK2552	70 MHZ, 2ch. Ocsilloscope	$1,015.00
01BK2553	70 MHz, 4ch. Oscilloscope	1,385.00
01BK2554	100 MHZ, 2ch. Oscilloscope	1,170.00
01BK2555	100 MHz, 4ch. Oscilloscope	1,615.00
01BK2556	200 MHz, 2ch. Oscilloscope	1,515.00
01BK2557	200 MHz, 4ch. Oscilloscope	2,015.00
01BK2558	300 MHz, 2ch. Oscilloscope	1,995.00
01BK2559	300 MHz, 4ch. Oscilloscope	2,495.00
ACCESSORIES		
01BKPR150B	150 MHz Passive Oscilloscope Probe	54.00
01BKPR250B	250 MHz Passive Oscilloscope Probe	64.00
01BKPR500B	500 MHZ Passive Oscilloscope Probe	104.00
01BKPR2000B	200 MHz High Voltage Oscilloscope Probe	109.00
01BKCC510	General Purpose Function Generator Kit	169.00
01BKCC540	General Purpose Oscilloscope Adapter Kit	365.00
01BKPR-60	Active Differential Probe (25 MHz)	369.00

GW INSTEK DIGITAL STORAGE SCOPES

GDS 2000A SERIES WITH FIELD INSTALLABLE LOGIC ANALYZER & FUNCTION GENERATOR MODULES

Two plug-in compartments in the back of these instruments offer the economical flexibility to either add an optional 8 or 16 channel logic analyzer module, or a 5MHz function generator module, or both. These optional modules may be added and field-installed at any time. Using VPO advanced signal processing, this scope series is capable of examining signals and capturing glitches without missing any detail. VPO enables the display of signals to be distinguished based on their recurring frequencies. Many additional advanced features including segment memory function, search function and more.

- Field-installable 8 and 16 channel logic analyzer module to upgrade to MSO
- Field-installable 5MHz function generator module option
- Built-in segmented memory and waveform search function
- Optimizes efficiency of memory length. analyze min, max, mean with built-in segmented memory
- Dual display with Play/Stop and Zoom window rapidly navigates waveforms
- Large, 8" high resolution TFT LCD display
- 100Gs/sec equivalent sampling rate, 2Gs/sec real time
- 2M memory
- 80,000 WFM/s waveform update rate
- 26 auto measurement functions
- FFT computing provides Frequency Domain Analysis

Part No.	Description	Price
01GDS2072A	70 MHz 2 Channel	$750.00
01GDS2074A	70 MHz 4 Channel	1,395.00
01GDS2102A	100 MHz 2 Channel	1,025.00
01GDS2104A	100 MHz 4 Channel	1,525.00
01GDS2202A	200 MHz 2 Channel	1,465.00
01GDS2204A	200 MHz 4 Channel	1,775.00
01GDS2302A	300 MHz 2 Channel	2,150.00
01GDS2304A	300 MHz 4 Channel	2,595.00
01DS28LA	8 Channel Logic Analyzer Module	570.00
01DS216LA	16 Channel Logic Analyzer Module	830.00
01DSFGN	Function Generator Module	245.00
01DS2LAN	LAN	280.00
01DS2GPIB	GPIB Interface	400.00

RIGOL

DIGITAL OSCILLOSCOPES

70MHz/100MHz/200MHz/300MHz

LOGIC ANALYZER MODULE (OPTIONAL)

RIGOL 2000 Series digital oscilloscope are new high-quality dual-channel oscilloscopes. These compact lightweight digital oscilloscopes provide exceptionally accurate waveform viewing and measurements. They provides up to 50,000 wfms/s waveform acquisition rate.

The 2000 Series digital oscilloscope is ideal for production tests, field service, research, design and all other applications involving analog/digital circuit tests and troubleshooting, as well as education and training.

- **Bandwidth:** 70 - 300MHz. 2 Channels. Real-time sample rates: 2 GSa/s.
- **Memory depth:** 14 Mpts.
- Innovative UltraVision technology. Vertical sensitivity: 500 V/div - 10V/div. 8-inch color LCD
- Waveform acquisition rate up to 50,000 wfms/s.
- **Math functions:** Add, Subtract, Multiply, FFT.
- Standard interface: USB host & device, LAN, AUX. Recommended calibration interval period is 1 year.
- Real-time waveform recording, waveform playback, and waveform analysis. Compact design
- Function/Arb Generator Board (OPTIONAL)
- Logic Analyzer (16 bit) optional

Part No.	Description	Price
01DS2072A	70MHz, 2ch scope	$839.00
01DS2072A-S	70MHz, 2ch w/ 1MHz Function Arbitrary Generator	$1,189.00
01MS02072A	70MHz, 2ch scope w/ Logic Analyzer 16bit	$1,239.00
01MS02072A-S	70MHz, 2ch scope w/ Logic Analyzer & 1MHz Func Arb Gen	$1,589.00
01DS2102A	100MHz, 2ch scope	$1,260.00
01DS2102A-S	100MHz, 2ch scope w/ 1MHz Function Arbitrary Generator	$1,650.00
01MS2102A	100MHz, 2ch w/ Logic Analyzer	$1,543.00
01MS2102A-S	100MHz, 2ch w/ Logic Analyzer and 1MHz Func Arb Generator	$1,893.00
01DS2202A	200MHz, 2 ch scope	$1,790.00
01DS2202A-S	200MHz, 2 ch w/ 1MHz Function Arbitrary Generator	$2,180.00
01MS02202A	200MHz, 2 ch w/ Logic Analyzer	$2,026.00
01MS02202A-S	200MHz, 2 ch w/ Logic Analyzer and 1MHz Function Arb Generator	$2,376.00
01DS2302A	300MHz, 2 ch scope	$2,450.00
01DS2302A-S	300MHz, 2 ch w/ 1MHz Function Arbitrary Generator	$2,830.00
01MS02302A	300MHz, 2 ch w/ Logic Analyzer	$2,621.00
01MS02302A-S	300MHz, 2 ch w/ Logic Analyzer and 1MHz Function Arbitrary Generator	$2,971.00

RIGOL

DIGITAL OSCILLOSCOPES

70MHz/100MHz/200MHz

LOGIC ANALYZER MODULE (OPTIONAL)

DS1000Z series are a 4-channel digital oscilloscope bandwidth 50MHz ~ 200MHz, sample rates up to 1GSa /s, while both deep storage depth and high waveform capture rate, high performance economical general purpose digital oscilloscopes.

DS1000Z series uses many of today's advanced technology and processes, the overall performance reached the international advanced level, for the most widely used digital oscilloscope markets including communications, semiconductor, automotive electronics, site maintenance, research/education and man other areas of universal design / debugging / testing requirements and design an oscilloscope.

- 1GSa/s Sample Rate
- **UltraVision:** Deeper memory(Std.12Mpts,Opt.24Mpts)
- **UltraVision:** Up to 30,000 wfms/s Waveform capture rate
- **UltraVision:** Multi-Level intensity grading display
- **UltraVision:**Realtime waveform Record,Replay, function (Opt.)
- A variety of Math Functions
- FFT function
- A variety of Trigger Functions
- Optional Serial Bus Triggering and Decoding functions(RS232,I2C,SPI)
- Standard Mask test function
- Automatic Measurements with Statistics
- Optional Function/Arbitrary Generator

Part No.	Description	Price
01DS1054Z	50MHz, 4ch scope	$399.00
01DS1074Z	70MHz, 4ch scope	$585.00
01DS1074Z-S	70MHz, 4ch w/ 25MHz Function Arbitrary Generator	$818.00
01MS01074Z	70MHz, 4ch w/ Logic Analyzer	$835.00
01MS01074Z-S	70MHz, 4ch w/ Logic Analyzer and 25MHz Func Arb Generator	$1,068.00
01DS1104Z	100MHz, 4ch scope	$830.00
01DS1104Z-S	100MHz, 4ch w/ 25MHz Function Arbitrary Generator	$1,080.00
01MS01104Z	100MHz, 4ch w/ Logic Analyzer	$997.00
01MS01104Z-S	100MHz, 4ch w/ Logic Analyzer and 25MHz Func Arb Generator	$1,229.00
01DS1204B	200MHz, 4 ch, 2GS/s Scope	$1,395.00
01DSRACK	Rack Maintaining Kit for DS1000Z	$137.00

RSR 4 – IN – 1 INSTRUMENT LAB BENCH SET-UP

MODEL RSR 4-IN-1

CONTAINS ALL FOLLOWING BENCH TYPE INSTRUMENTS:

— Sweep Function Generator
— Triple Output Power Supply
— Digital Multimeter
— Oscilloscope

FG-32

PHSY3002-3

DM9803R

GOS-620

GDS1052U

- Save time AND MONEY by ordering the 4-IN-1
- All quality, best selling models included
- Simplify your ordering process
- Analog and Digital Storage Scope versions available
- Customized packages available for ten or more units (add or substitute other models). Call for custom package quote *(10 + required)*

DETAILS ON INSTRUMENTS:

Sweep Function Generator – Model FG-32. Best value, top seller. 3MHz with digital display. Six waveform functions (sine, triangle, square, ramp, pulse). Internal/External frequency counter function

Triple Output Power Supply – Model PHSY3002-3. Best value, top seller. DC outputs are variable 0 ~ 30VDC @ 0 ~ 2 amps (two outputs), and a fixed 5V @ 3 amp.

Digital Multimeter – Model DM9803R. Best value, top seller. Bench DMM with large, 3 LCD display with back light and 42 segment bar graph. RS232 computer interface included with software and cable. DC, AC, Resistance, Capacitance, Frequency functions. AC or DC (battery) operation possible.

Oscilloscope – Model GOS-620 *(included with 01RSRANA4)*. Best value and top seller in its class. 20MHz, dual channel analog scope. High sensitivity with ALT trigger function

Oscilloscope – GW Instek Model GDS1052U *(included with 01RSRDIG4)*. 50MHz, 2 channel digital scope

Part No.	Description	Price
01RSRANA4	Four-In-One Bench Set-up w/20MHz Analog Scope	$750.00
01RSRDIG4	Four-In-One Bench Set-up w/50Mhz Digital Scope	735.00

RSR SCOPE PROBE

SWITCHABLE

60, 100, 250 MHZ

B.W. DC to 60/100/150 MHz. BNC to IC Test Hook, with selectable X1, X10 switch. Includes 1 ea. probe, spring hook, ground lead, insulating tip, measuring tip, IC tip, adjusting tool, channel identifier clips.

Part No.	Description	1-9	10-99	100+
05SPAK220	60 MHz	$13.95	$11.95	$9.95
05SPAK510	100 MHz	$17.95	$15.95	$13.95
05SPGL250	250 MHz	21.95	19.95	17.95

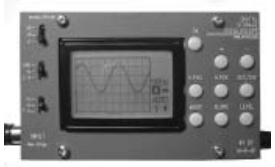
DIGITAL OSCILLOSCOPE

SMALL PORTABLE 1 CHANNEL 1MHZ / 10 MHZ

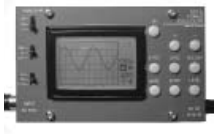
Models: DSO 062, DSO 082

Features

- 1MHz bandwidth (5 Ms/s sampling rate)-Model-DSO 062
- 10 MHz Bandwidth (50Ms/s sampling rate) - Model-DSO 082
- 100 mv/div. to 5V/div. sensitivity - Model-DSO 062
- 10mv/div. to 5V/div. sensitivity - Model-DSO 082
- 50V peak to peak max. input
- DC/AC coupling
- Probe and adaptor included
- Save / recall up to 4 captures
- FFT with selectable points (Model-DSO 082)
- **Size:** 5" x 2.7" x 1.2"; **Wt**. 5 oz. (DS082)
- **Size:** 4.3" x 2.6" x 1" **Wt**. 4.5 oz. (DS062)



DS 062



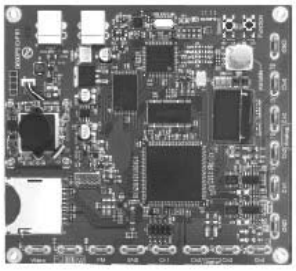
DS 082

Part No.	Description	Price
01DS062	DS062 - 1MHz Oscilloscope	69.95
01DS082	DS082 - 10MHz Oscilloscope	125.00

GW INSTEK

OSCILLOSCOPE TRAINING KIT

MODEL GDB03



The GDB-03 training kit is designed to work with the INSTEK GDS2xxxA series oscilloscopes and the INSTEK GDS3xxx series oscilloscopes. It enables the user to learn both the basic and the advanced functions of these Digital Storage Oscilloscopes (DSO's). Following the training procedures of this training kit, you will quickly understand basic operations. Many advanced operations and unique features of these scopes are also covered. (3) types of bus signals, (9) basic and (18) advanced scope training signals are provided

Part No.	Description	Price
01GDB03	Oscilloscope training kit for INSTEK for 2xxx and 3 xxx series scopes	$285.00

OWON HANDHELD OSCILLOSCOPE

20 MHZ SINGLE/DUAL CHANNEL

This is a handheld electrical test device that combines a 20MHz, handheld digital oscilloscope for viewing electrical signals with a manual- and auto-ranging digital multimeter for measuring AC and DC voltage to 400V, AC and DC current to 10 amp, resistance to 40 MO, and capacitance to 100 F. The oscilloscope has a maximum real-time sample rate of 100 MS/s and a record length of 6,000 points per channel for acquiring detailed waveforms. Its four math functions—add, subtract, multiply, and divide—plus FFT (fast Fourier transform) and 20 automatic measurements such as period, frequency, and peak-to-peak enable an in-depth analysis of waveforms. Up to four waveforms can be stored in the internal memory. The multimeter has two ranging modes: manual, which allows the user to select the operating range, and auto, which automatically selects the appropriate operating range. The delta relative function allows a measurement to be set as a reference value and displays subsequent measurements as a positive or negative deviation from that value, and the data-hold function freezes a reading on the display to aid documentation. A continuity buzzer confirms that the circuit conducts electricity, and a diode check detects whether a circuit's diodes are working properly. Additional specifications include a rise time of 17.5 ns and various triggering features. The unit has a 3.5" color TFT (thin film transistor)

Maximum real-time sampling rate 100 Ms/s & 6,000 points record length per channel

Part No.	Description	Price
01HDS1021M	20 MHz; single channel	$295
01HDS1022M-N	20 MHz; 2 channel	$435

GW INSTEK 20MHZ, DUAL CHANNEL HANDHELD DIGITAL SCOPE AND DMM

MODEL GDS-122

Equipped with a 3.8" color LCD, this is a powerful handheld DSO and DMM combined. The color display helps to clearly show 2 different channel waveforms simultaneously. With 100 MS/s real-time sampling rate and Dual Waveform Math (DWM) function it provides users with fast analyzing capability. 6K memory (per channel) gives this model impressively accurate data-capture to satisfy diverse industrial requirements. It also serves as a 3 digit, 4,000 count DMM with auto or manual range options. Among many other features are a self calibration function and free PC software.

- 20MHz, dual channel Digital Storage Scope
- 100MS/s real-time sampling
- 6K memory points per channel
- Dual Waveform Math (DWM)
- 5 automatic measurements, cursors, USB and RS232 interface
- 6 hours running time on battery, charger included
- Multimeter functions: voltage, current, resistance, continuity, diode, capacitance, true RMS
- Isolated inputs between scope and multimeter

Part No. 01GDS122 • Price: $720.00

SIGLENT HANDHELD OSCILLOSCOPE

60MHz/100MHz/150MHz

SHS800 Series Handheld Digital Oscilloscopes offers a powerful high-performance oscilloscope and a high precision multimeter. Some outstanding features and applications include a data recorder function with 7M internal storage up to 18 hrs recording time, a 32 measurement trend plot analyzer and can be utilized for automotive electronics, power system electricity test and plant automation control systems.

Features:

- Real time sampling rate: 1GSa/s
- Memory Depth: 2 Mpts
- Triggerin: Edgek, Pulse, Video, Slope
- Interface: USB Device, USB Host
- Accurate measurement of DCV, ACV, DCI, ACI
- Accurate measurement of resistance, diode, capacitance
- Display: 6000 Counts

Part No.	Description	Price
01SHS806	60 MHz Bandwidth	$465.00
01SHS810	100 MHz Bandwidth	$573.00
01SHS815	150 MHz Bandwidth	$608.00

HANDHELD DIGITAL SCOPE AND DMM

60 MHZ BW / 2 CHANNELS

- 60 MHz bandwidth with 2 channels
- 150Msa/s real-time sampling rate
- 5 Gsa/s equivalent-time sampling rate
- Large 5.7" TFT color display
- 6000-count DMM resolution
- USB host/device 2.0 interface
- **Memory:** 32K single channel, 16K at dual
- Multi-language support
- Battery power operation
- **Vertical:** Rise time <5.8ns
- **Cursors / Measurements:** Vpp, Vmax, Vmin, Vrms, Vbase, Vmid, preshoot, overshoot
- **Time Measurement:** Freq., period, rise, fall, width, duty cycle.
- **Dimension:** 245x163x52mm; 3 lbs

Part No 01DSMM1 • Price: $395.00

velleman PERSONAL SCOPE

MODEL HPS50

Designed By electronics enthusiasts For electronics enthusiasts! Powerful, compact and USB connectivity. The large keyboard and bright LCD makes this unit a breeze to use.

- 40MHz sampling rate
- 12MHz analog bandwidth
- 0.1mV sensitivity
- 5mV to 20V/div in 12 steps
- 50ns to 1hour/div time base in 34 steps
- Ultra fast full auto set up option
- Adjustable trigger level
- X and Y position signal shift
- DVM readout
- Audio power calculation (rms and peak) in 2, 4, 8, 16 & 32 ohm
- dBm, dBV, DC, rms ...measurements
- Signal markers for Volt and Time
- Frequency readout (through markers)
- Recorder function (roll mode)
- Signal storage (2 memories)
- High resolution LCD 192x112 pixels
- LCD backlight
- Galvanically separated USB output for PC
- Data or bitmap download to PC

Part No. 01VHPS50 • Price: $295.00

LOGIC ANALYZER PORTABLE

FEATURES:

- A portable small-sized analyzer
- Easy to use; makes debugging convenient
- Provides a PC-LINK interface to observe and print waveforms using your PC
- 5.6" color TFT display

SPECIFICATIONS

- 250MHz timing and 100MHz state analysis ***(LA2025)***
- 500MHz timing and 200MHz state analysis ***(LA2050)***
- **Saved Waveform:** 512K x 32 ***(LA2025)***
- **Saved Waveform:** 1M x 32 ***(LA2050)***
- **Memory:** 2M ***(LA2025)***, 4M ***(LA2050)***
- **Skew:** Typically less than 2.0 ns, maximum: 3.0 ns
- **Speed of scanning:** 5s/div – 14 ns/div
- **Trigger channel:** 32CH (8CHx4)
- **DPI:** 1 bit
- **Trigger signal:** 5ns
- **Various ways to collect data:** Single, Run, Autostore
- **Size:** 12.2 x 2.8 x 5.9 (inches)
- **Weight:** 5 lbs.
- **Power:** 90–240 VAC, 50–60 Hz
- **Package contents:** Unit; data pods (4); lead sets (4), test probe (36); AC cord; USB cable; CD and manual

Part No	Price
01LA2025	$1,850.00
01LA2050	2,695.00

ipi HAND HELD DMM/SCOPE

WITH TRUE RMS, AUTORANGING

MODEL SCOPE PLUS 440

Versatile, combination unit, featuring a 1 MHz hand-held oscilloscope plus a wide range of both standard and special DMM functions. Unit comes complete with rubber holster and stand, NiCad battery and charger/ adaptor, test leads and 38 page manual.

1 MHZ OSCILLOSCOPE

Glitch Capture (25 ms/s), continuous autoset, real time display, cursor measurements, flexible triggering, roll mode, optional RS-232 output.

TRUE RMS DMM

- **Voltage** – 1,000VDC, 5 Ranges; 750VAC, 4 Ranges, True RMS
- **Current –** 10A AC/DC, 6 Ranges
- **Resistance** – 40M, 6 Ranges
- **Capacitance** – 400 F, 6 Ranges
- **Frequency** – 2 MHz, 5 Ranges
- Diode test, continuity buzzer, component test, logic test, REL function, peak hold, minmax record, compare mode, trend, joystick function selector, auto-ranging, built-in true RMS, 4,000 count display, back light, on board help text switch

Applications: View industrial signals, capture noise spikes and glitches, monitor power quality, audio/video, digital circuitry, communications.

Part No.	Description	1-4	5+
01OSDM440	Model 440 DMM/Scope	$355.00	$345.00
01A900	Soft Carrying Case	21.95	20.90
01A402	Software & Cable For Scope Plus	59.95	56.95

HANDHELD DIGITAL SCOPE METER

MODELS S2401 (1MHZ) AND S2405 (5MHZ)

With built-in autoranging true RMS DMM

- Dual channel and auto calibration
- **Oscilloscope PE Bandwidth:** DC to 1MHz (S2401) DC to 5MHz (S2405)
- **Sampling Time:** Dual CH Mode: 25Ms/s Single CH Mode: 50Ms/s
- Automatic setting for horizontal and vertical division
- Roll and single shot mode
- Excellent internal noise reduction
- Real time update
- 16 shot waveform and setup memories
- Max voltage between input and gound: DC or AC 600Vpeak
- USB interfaces for transferring measurement data and waveform
- **DMM Features**: DC V: 5V – 1000V AC V: 3V – 750V
- **Resistance:** 5K ohm – 5M Ohm
- Continuity buzzer [Frequency (full auto range) 10MHz is for ***S2405*** only]
- **Power Requirement:** Ni-MH batteries 4.8V (1.2V x 4 cell)
- **Dimensions/Weight:** 90 (W) x 195 (H) x 40 (D) mm / 1 lb.

Part No.	Description	Price
01OSS2401	1MHz Digital Scope Meter	$399.00
01OSS2405	5MHz Digital Scope Meter	439.00

POCKET HANDHELD OSCILLOSCOPE

DSO NANO V3 / USB

The DSO Nano V3 is a pocket-size compatible 32bit digital storage oscilloscope. Based on ARM -M3, it's equipped with 320*240 color display, SD card, USB port and recharging function. It's compact, simple to operate; meets the basic demands of school lab, electronic troubleshooting, etc

Features:

- Portable and lightweight
- Color display
- Waveform storage and playback
- 6 triggering modes
- 200Khz Analog Bandwidth
- Built-in Signal Generator
- Display: 2.8'' color TFT LCD
- Vertical Sensitivity: 10mv/Div~10V/Div(x1 probe) 0.5V/Div~10V/Div(x10 probe)
- Input Resistance: >500KO
- Max. Input Voltage: 80Vp-p(x1 probe)400Vpp(x10 probe)
- Triggering Mode: Auto, Normal, Single, None
- Auto Measurement: Frequency, cycle, duty, Vpp, Vram, Vavg, DC voltage; Vertical Precise Measurement Cursor; Horizontal Precise Measurement Cursor; Rising/Falling Edge Trigger; Triggering Cursor; Triggering Sensitivity Cursor; Hold/Run
- Inbuilt Test Signal: 10Hz-1MHz (1-2-5 stepping)
- PC Connection Interface: Connection through USB
- Recharging Method: Through USB interface
- Dimensions: 105mm x 53mm x8mm

Part No. 01DSONANO • Price $99.50

RSR SCOPE PROBE

SWITCHABLE

60, 100, 250 MHZ

- B.W. DC to 60/100/150 MHz.
- BNC to IC Test Hook, with selectable X1, X10 switch.

Includes:

- 1 ea. probe
- Spring hook
- Ground lead
- Insulating tip
- Measuring tip
- IC tip
- Adjusting tool
- Channel identifier clips.

Part No.	Description	1-9	10-99	100+
05SPAK220	60 MHz	$13.95	$11.95	$9.95
05SPAK510	100 MHz	$17.95	$15.95	$13.95
05SPGL250	250 MHz	21.95	19.95	17.95

GW INSTEK

DIGITAL STORAGE OSCILLOSCOPES

GDS200/300 SERIES

COMPACT, 7" FULL TOUCHSCREEN SCOPES

- 70MHz, 100MHz, 200MHz models
- 50,000 count built-in DMM (GDS-300 series) 5,000 count built-in DMM (GDS-200 series)
- All 2-channel models, 1Gsa/s sample rate
- 5M memory depth per channel (GDS-300) 1M memory depth per channel (GDS-200)
- Full touch panel capacitive LCD multi-point control with landscape and portrait display 7", 800 x 480 pixels. adjustable backlight
- **Specifications:** Height (10"); Weight (3.3 lbs.)
- **Additional features:** engineering calculator, SMD resistance coding, color coding info and attenuation calculation, application software, 30,000 consecutive waveform log function to replay measurement results, temp measurement and logging, optional differential probe for isolation effect and additional accessories.

Part No.	Description	Price
01GDS320	200MHz, w/ 50,000 count DMM	$2,495.00
01GDS310	100MHz, w/ 50,000 count DMM	$1,870.00
01GDS307	70MHz, w/ 50,000 count DMM	$1,495.00
01GDS220	200MHz, w/ 5,000 count DMM	$1,995.00
01GDS210	100MHz, w/ 5,000 count DMM	$1,495.00
01GDS207	70MHz, w/ 5,000 count DMM	$1,195.00
	Optional	
01GTP200A4	Optional 200MHz probe	$25.00
01GSC010	Soft carry case option	$47.00
01GSC011	Soft carry bag option	$18.00
01GAP001	AC/DC adaptor option	$36.00
01GWS001	Wrist strap option	$15.00
01GDP040D	40MHz dual channel, differential probe Cat II 600V	$499.00
01GTL253	Mini USB cable Type A	$15.00
01GCL001	Vertical calibration cable	$29.00

velleman POCKET HANDHELD SCOPE

MODEL HPS140I

FEATURES:
- 40Mega samples/sec in real time
- Bandwidth up to 10MHz
- Full auto range option
- Sensitivity down to 0.1mV
- Signal markers for amplitude and time
- Memory Hold function
- Direct audio power measurement
- USB battery charger included
- X10 measuring probe included
- Optional: Carrying Bag BAGPS

SPECIFICATIONS:
- Bandwidth: up to 10 MHz (-3dB or -4dB at selected ranges)
- Input range: 1mV to 20V/division in 14 steps
- Input coupling: DC, AC and GND
- Real-time sample rate up to 40MS/s
- AD resolution: 8 bits
- Time base: 250ns to 1h per division
- Auto set-up function (or manual)
- Probe x10 readout option
- Readouts: DC, AC+DC,True RMS, dBm, Vpp, Min-Max. (2.5%)
- Audio power measurement from 2 to 32 ohms
- Hold & store function
- Time and Voltage markers readout
- Max. 100Vp AC+DC
- White LED backlight
- Operates on NiMH rechargeable battery pack (included)
- Operates up to 6 hours on one charge*
- Charging power supply: 9Vdc/200mA
- For use on CLASS II pollution degree II installations
- Dimensions: 74 x 114 x 29mm / 2.9 x 4.5 x 1.14"
- Weight: 200g, (7oz)

Part No. 01OSHPTS1401 • Price: $169.00

velleman POCKET, HANDHELD SCOPE

MODEL PPS10

Joystick control for true handheld operation. Set all functions using your thumb. With interface for PC connectivity, it has 10 Ms/s sampling rate, and 2MHz bandwidth with 0.1mV sensitivity.

- Measurements: dBm, dBV, DC, rms ...
- Trigger mode: run, normal, once, roll, slope +/-
- X and Y position signal shift
- Audio power calculation (rms and peak)
- Signal markers for Volt and Time
- Frequency readout (through markers)
- Recorder function (roll mode)
- Signal storage (2 memories)
- Full auto set up
- LCD: 128 x 64 pixels / high-contrast
- DVM read-out with x10 option
- Time base: 200ns to 1hour/ div in 32 steps
- 5mV to 20V/div in 12 steps
- 0.1mV sensitivity
- 10Ms/s sampling rate
- Up to 2MHz analogue bandwidth
- Joystick operation
- Optical isolated RS232 output for PC
- Weight: 0.87 lbs.
- 5 – 1.5V AAA battery or Nicd / NiMH *(not included)*
- Includes internal battery charging circuit
- 9V adapter/300mA optional *(not included)*

Part No. 01PPS10 • Price: $165.00

velleman ADVANCED PERSONAL SCOPE

MODEL APS230 - 30MHZ, DUAL CHANNEL

The Advanced Personal Scope comes complete with two sets of probes, software CD, cable to connect to PC and battery pack. A fast charge is possible, and you may use the scope during charging.

- 2 – input channels. 30MHz bandwidth. 240MS/s per channel sampling
- step markers. 8 bit vertical resolution. 30uV min sensitivity
- 1mV ~ 20V/div volts per div. 25ns ~ 1hr/div time base
- AC/DC input coupling. RS232 communication with PC
- Dimensions: 9.1" x 5.9" x 2". 30 oz
- Battery pack included. Fast charge possible
- High contrast LCD with white backlight
- Full auto set-up for volt/div and time/div
- Recorder roll mode up to 170h per screen, trigger mode (run, normal, once, roll), adjustable trigger level and slope
- Peak measurements: max, min, peak to peak
- Measurements: ms, dB(rel), dBV, dBm, dBG. Direct audio power measurements
- Complete with probes, software, cable, battery pack

Part No. 01OSAPS230 • Price: $495.00

velleman OSCILLOSCOPE TRAINING KIT

Learn how to get the most out of your digital oscilloscope. The board generates a number of safe 'real-world' signals, which we will use to perform measurements. Get familiarized with AC, DC and frequency measurements, sine and square waves, power supply ripple, full and half wave rectifiers, oscillators etc…
Learn what terms such as V/div, Time/ div, trigger level, auto-setup etc… mean. All experiments featured in this project are performed with the Velleman HPS140 Handheld Pocket Scope. Most experiments can be done with any digital storage scope. Some experiments can be performed with an analog scope.

Features:
- Signals:
- Alternating current (AC)
- Adjustable AC
- Full-and half wave rectified AC
- Smoothed direct current (DC)
- Ripple
- Astable oscillator
- Assembled and tested, no soldering required

Specifications:
- Power supply: 9...12VAC / min.100mA (adapter not incl.)
- Dimensions: 116x74x24mm / 4.6x2.9x0.9"
- Optional: 9VAC /500mA adapter PS905AC

Part No.32VKEDU06 • Price: $29.50

OSCILLOSCOPE PC BASED

DUAL CHANNEL

40 MHZ / 100 MHZ

- USB-powered 2 channel digital storage scopes.
- Real-time sampling – 100MS/s and 250Ms/s
- Buffer size 10K ~ 28K.
- Measurements: Vp-p, Vmax-,Vmin, Vmean, Vamp, Vhigh, Vlow, positive/negative overshoot, cyclemean, cycle rms, period, frequency puls width, ris time (10% ~ 90%), fall time (10% ~ 90 %), positive negative duty cycle.

Part No.	Description	Price
01DSO2090	40 MHz BW	$199.00
01OSDSO2250	100 MHz BW	319.00

velleman

2-CHANNEL USB PC OSCILLOSCOPE, 60MHZ

MODEL PCSU1000

The PCSU1000 digital storage oscilloscope uses the power of your PC to visualize electrical signals. Its high sensitive display resolution, down to 0.15mV, combined with a high bandwidth and sampling frequency up to 1GHZ give this unit all the power you need.
The USB connection makes this PC based instrument a snap to set-up, no external power required! In-the-field measurements, using a lap-top, have never been this easy. Comes in a stylish vertical space saving design.
Powerful software will fulfill all your needs, but for those who like a challenge; a DLL is supplied, which allows you to create your own application.

- Inputs: 2 channels, 1 external trigger input
- Input impedance: 1Mohm // 30pF
- Bandwidth: DC to 60 MHz "3dB
- Max. input voltage: 30V (AC + DC)
- Input coupling: DC, AC and GND
- Supply from USB port (500mA)
- Minimum system requirements:
- IBM compatible PC
- Needs Win98SE or higher
- SVGA display card (min. 800x600, 1024x768 recommended)
- Mouse
- USB port 1.1 or 2.0 compatible
- CD Rom player

Includes:

- USB PC oscilloscope
- 2 x 60MHz scope probe
- USB cable
- Software on CD
- Getting started manual
- Translations on CD

Part No. 01OSPCSU1000 • Price: $379.00

velleman

PC OSCILLOSCOPE / FUNCTION GENERATOR

2 CHANNEL, 12MHZ BW

MODEL PCSGU250

A complete USB-powered lab-in-a-box Feature-packed **PcLab2000-LT software for two channel oscilloscope, spectrum analyser, recorder, function generator and bode plotter.** With the generator, you can create your own waveforms using the integrated signal wave editor. For automated measurements, it is even possible to generate wave sequences, using file or computer RS232 input.

- **Oscilloscope:**
  - BW: DC to 12MHz
  - auto set-up function and X10 option
  - pre-trigger function
  - readouts: True RMS, dBV, dBm, p to p, Duty cycle, Frequency
  - Sampling frequecy: Up to 25Mhz
- **Function Generator**
  - Crystal-based stability
  - Standard waveforms: sine, square and triangle
  - Predefined library waveforms included: sine(x)/x, DCV, sweep
- **Spectrum Analyser:**
  - Linear or logarithmic timescale
  - Operating principle: FFT (Fast Fourier Transform)
  - FFT input channel: CH1 or CH2
  - Zoom function
- **Bode Plotter:**
  - Automated sync between oscilloscope and generator
  - Logatithmic scale option
  - Volt or dB display scale
  - Phase plot option
- **Transient Recorder**
- **System Requirements**
  - IBM compatible PC
  - Windows™ 2000, XP, Vista

Part No. 01PCSGU250 • Price: $195.00

velleman

USB PC OSCILLOSCOPE WITH SIGNAL GENERATOR

Features

- Function generator:
  crystal-based stability
  standard waveforms: sine, square and triangle predefined library wave forms 1 included: sine(x)/x, sweep,...
- Oscilloscope:
  auto set-up function and X10 option
  pre-trigger function readouts: True RMS, dBV, dBm, p to p, Duty cycle, Frequency persistence options: color Graded, Variable and Infinite
- Transient recorder:
  automatic data storage automatic recording for more than 1 year recording and display of screensrecording and display of screens
- Bode Plotter:
  automated sync between oscilloscope and generator
  logatithmic scale option
  Volt or dB display scale
  phase plot option
- Spectrum analyzer:
  linear or logarithmic time scale
  operating principle: FFT (Fast Fourier Transform)
  FFT input channel: CH1 or CH2
  zoom function
- Includes:
  getting started manual
  USB PC Scope+generator unit
  USB cable

Part No. 01PCSU200 • Price: $149.00

HANDHELD DIGITAL SCOPE AND DMM

60 MHZ BW / 2 CHANNELS

- 60 MHz bandwidth with 2 channels
- 150Msa/s real-time sampling rate
- 5 Gsa/s equivalent-time sampling rate
- Large 5.7" TFT color display
- 6000-count DMM resolution
- USB host/device 2.0 interface
- **Memory:** 32K single channel, 16K at dual
- Multi-language support
- Battery power operation
- **Vertical:** Rise time <5.8ns
- **Cursors / Measurements:** Vpp, Vmax, Vmin, Vrms, Vbase, Vmid, preshoot, overshoot
- **Time Measurement:** Freq., period, rise, fall, width, duty cycle.
- **Dimension:** 245x163x52mm; 3 lbs

Part No 01DSMM1 • Price: $395.00

FLUKE HANDHELD DIGITAL STORAGE OSCILLOSCOPE SCOPE METER®

40 MHZ WITH DMM

The compact ScopeMeter 120 Series is the rugged solution for industrial troubleshooting and installation applications. It's a truly integrated test tool, with oscilloscope, multimeter and "paperless recorder in one affordable, easy-to-use instrument. Find fast answers to problems in machinery, instrumentation, control and power systems.

- Dual-input 40 MHz or 20 MHz digital oscilloscope
- Two 5,000 counts true-RMS digital multimeters
- Automatic measurements
- A dual-input TrendPlot™ recorder
- Connect-and-View™ trigger simplicity for hands-off operation
- Shielded test leads for oscilloscope, voltage, resistance and continuity measurements
- 10:1 Voltage Probe included with Fluke 124 and 125 for high frequency measurements
- Up to 7 hours battery operation
- 600 V CAT III safety certified
- Optically-isolated interface for PC connection
- Rugged, compact case
- Fluke 125 gives bus health and power measurements

Detailed Specs Available Upon Request

Part No.	Description	Price
01FK124	40MHz Scopemeter®	$1,715.00
01FK124S	40MHz Scopemeter® w/Software, Case & RS232 Cable	2,095.00

FLUKE SCOPEMETER® OSCILLOSCOPES

MODELS 190-062, 062/S, 190-202, 202/S

As the first two and four-channel portable scopes safety rated CAT III 1000V / CAT IV 600V, the new Fluke ScopeMeter®190 Series II combines an unprecedented level of performance, ruggedness, and portability. You can choose from 60MHz, 100MHz or 200MHz bandwidth models, both with real-time sampling rates up to 2.5 GS/s and 400 ps resolution to capture noise and other disturbances. Both models feature deep memory—up to 10,000 samples per channel— so you can examine very small parts of the waveform in detail. And both are IP-51 rated to withstand dust, drips, humidity, and wide temperature variations. Fluke ScopeMeter test tools are hand-held battery operated, designed to meet the demands of field service professionals.

Part No.	Description	Price
01FLK190-062	Fluke 190-062 ScopeMeter® (60MHz)	$2,895
01FLK190-062/S	Fluke 190-062 ScopeMeter® (60-MHz) with SCC-290 kit included	3,385
01FLK190-202	Fluke 190-202 ScopeMeter® (200MHz)	3,690
01FLK190-202/S	Fluke 190-202 ScopeMeter® (200MHz) with SCC-290 kit included	4,295

FLUKE HANDHELD DIGITAL STORAGE OSCILLOSCOPE SCOPE METER®

- 1.25GS/sec repetitive sampling rate
- Connect-and-View™ hands-off operation
- Dual channel TrendPlot™ for "cause & result" trouble-shooting
- Single test leads for all measurements – waveform display, multiple meter readings, capacitance, resistance and continuity
- Optical-to-RS232 interface port, 600V isolation
- 2-channel, True RMS, 5000 count DMM

This 20MHz digital storage scope is the ideal choice for technicians trouble-shooting industrial machinery, instrumentation, control and power systems including: AC/DC motor drives, sensors and actuators, power lines, transformers and converters, and analog and digital control loops. The patented Connect-and-View hands-off operation saves time in fault finding by providing a stable, reliable, and repeatable display of signals without touching a button. Works for even the most complex signals including motor drives and video. Dual channel TrendPlot tracks intermittents by recording readings from minutes to days with time and date stamped minimum and maximum readouts. The built-in dual channel DMM measures VDC, True RMS VAC, AC/DC current, resistance, frequency, capacitance, temperature, continuity, diode, duty cycle, pulse width, phase A to B, crest factor, dBV and dBm.

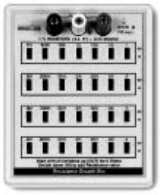
Detailed Specs Available Upon Request

Part No.	Description	Price
01FK123	20MHz Scopemeter®	$1,395.00
01FK123S	20MHz Scopemeter® w/Software, Case & RS232 Cable	1,850.00

SUBSTITUTION BOXES, RESISTANCE, CAP AND INDUCTANCE

COST EFFECTIVE

Affordable decade boxes with rugged quality and high precision. Perfect for educational use, R & D, service, production line testing and maintenance.



RBox-408

All Units Feature:
- Sturdy, multi-way binding posts
- Slide switches add/subtract for desired value
- Durable ABS plastic housing case

CBox-406

Model RBOX-408 Resistance Decade Box
- 1 ohm to 11 Meg
- 1 ohm per step, 1% resistors 0.3W
- Seven decades of resistance

Model CBOX-406 Capacitance Decade Box
- 100 pF to 11 F
- 100 pF per step, 5% caps, 50V
- Five decades of capacitance

LBox-405

Model LBOX-405 Inductance Decade Box
- 10 H to 111.1 mH, wide range and high resolution
- Four decades of inductance
- Slide switches that allow the user to simply add or subtract for desire value.

Part No.	Description	1-9	10+
01RBOX408	Res. Sub. Box	$90.00	$85.00
01CBOX406	Cap. Sub. Box	115.00	110.00
01LBOX405	Ind. Sub. Box	128.00	119.00

Global® Specialties

SUBSTITUTION BOX RESISTANCE & CAP

- Convenient selection of standard resistors and capacitor values separately or in series and parallel RC combinations
- 36 resistor ranges in values from 15 ohms to 10M, 1 watt 10%
- 18 capacitor ranges in values from 100pf to .22 F, 600V 10%
- Perfect for educational experiments and circuit designs.
- Compact design
- Test leads with alligator clip connectors included

Part No. 01RC10 • Price: $170.00

RESISTANCE, CAPACITANCE & INDUCTANCE SUBSTITUTION BOXES

RC-Box L-Box R-Box C-Box

Dial in the desired value using the convenient side-by-side thumb-wheel switches. Color-coded switches separate various ranges. High-impact plastic cases.

RESISTANCE

Model RS200 – 1% Accuracy
Model RS201 – 0.1% Accuracy

1Ω to 9,999,999Ω in 1Ω steps. Rated 0.5W. Residual impedance 0.3Ω. $3\frac{1}{4}$" x $3\frac{1}{4}$" x $2\frac{1}{4}$".

CAPACITANCE

Model CS300 – 4% Accuracy
Model CS301 – 1% Accuracy

100pF to 99.9999 F in 100pF steps. Rating 100V (20V for 10-100 F scale). Residual impedance 30pF. $4\frac{1}{4}$" x $3\frac{1}{4}$"

COMBINED RESISTANCE/CAPACITANCE

Combines the features of a resistance and capacitance. Resistance and capacitance can be used independently, in series, or in parallel. Shorting link allows them to be coupled or separated. $7\frac{1}{2}$" x $4\frac{1}{4}$" x $2\frac{1}{4}$"

Model RCS500
Combines the features and specifications of RS200 and CS300.

Model RCS502
Combines the features and specifications of RS201 and CS301.

INDUCTANCE

Models LS400A and LS400

Model LS400A (Standard Model) features 0-999mH in 1mH steps. **Model LS400** (Wide Range Model) features 0-9.999H in 1 mH steps. Both models have:
- 1% accuracy (1.5% max)
- Residual impedance 0.2Ω typical
- $4\frac{3}{4}$" x $3\frac{1}{8}$" x $2\frac{1}{4}$"

Part No.	Description	Price
01RS200	Resistance – 1% Accuracy	$185.00
01RS201	Resistance – 0.1% Accuracy	340.00
01CS300	Capacitance – 4% Accuracy	235.00
01CS301	Capacitance – 1% Accuracy	360.00
01RCS500	Combined Resis. Capacit.– Standard Model	370.00
01RCS502	Combined Resis. Capacit. – Precision Model	680.00
01LS400A	Inductance – Standard Model	695.00
01LS400	Inductance – Wide Range Model	980.00

BK PRECISION

POWER SUPPLY/BATTERY ELIMINATOR

3.3 / 4.5 / 6 / 7.5 / 9 / 12V,1A

MODEL 1513

This heavy duty battery eliminator can provide DC voltages up to 12 volts with a max output current of 1 amp.

Part No. 01BK1513 • Price: $34.00

BK PRECISION

LOW COST, BATTERY ELIMINATOR POWER SUPPLIES

***MODEL 1501* – 1.5V or 3V (3 Amp)**
***MODEL 1502* – 1.5V, 3V, 4.5V, 6V, 9V, 14V (1Amp)**

Model 1501

Model 1502

- Perfect for educational use. Eliminates need for batteries for projects, kits and prototyping.
- Use to power up circuit boards for service and repair
- Assembly and quality control applications for operation parameters of equipment and final testing.

Part No.	Description	Price
01BKPS1501	Dual Voltage, 3A	$105.00
01BKPS1502	Multi Voltage, 1A	166.00

Global Specialties

DIGITAL WATTMETERS

MODELS 1522 AND 1523

Accurate and inexpensive instruments designed to measure power consumption of equipment operating directly from standard 115VAC 60Hz. Also measures true RMS AC voltage and true RMS AC current. Functions easily selectable via front panel pushbutton switches.

Model 1522

Model 1523

- Measures True power up to 1999 watts ***(Model 1522)***; 2600 watts ***(Model 1523)***.
- Measures True RMS AC voltage and True RMS AC current up to 20 amps.
- Touch activated switches
- Green, 3.5 digit LED display (***Model 1522)***; Backlit LCD display ***(Model 1523)***
- Front and rear outlets
- Power over range indication.
- 20 Amp (35A peak) AC current.

Model 1523 Only

- Special measurement range for frequency and volt amps
- Autoscan feature

Part No.	Description	Price
01WM1522	Model 1522	$550.00
01WM1523	Model 1523	615.00

AC POWER SUPPLY

This safe, low voltage AC Power Supply features a CT transformer, panel-mounted fuse holder, on/off toggle switch, 2 wire line cord and a high impact styrene case. Output is 6.3 or 12.6V AC and is accessed from cover mounted binding posts.

Part No.	1-9	10+
3200ACPSK (Kit)	$16.95	$15.95
3200ACPSA (Assembled)	26.00	25.00

Global Specialties

AC POWER SUPPLY

MODEL 1507

- Variable isolated AC output from 0 to 150VAC
- Continuous 10 Amp output current to a maximum of 1300VAC
- Variable current adjust
- Two parallel three prong AC outlets allow the unit to be used for more than one load
- Two 3.5 inch high analog meters; one monitors AC line or output voltage and the other displays output current or leakage
- Leakage indicator and reset switch
- Audible alarm to warn of “hot” chassis or shorts
- Output overload protected
- AC input fuse protected
- AC output adjustable current
- Relay with manual reset

Part No. 01PS1507 • Price: $926.25

Global Specialties

VARIABLE LINE AC SOURCES

MODEL 1510 & 1515

Model 1510

Model 1515

- Continuous current ratings of 10A & 15A (*1515 Model)*
- Wide (47-450Hz) output frequency suitable for avionics testing and other stable high frequency applications
- Analog metering for determining fluctuations
- Special output ON/OFF voltage load switch enables or disables load at set voltage
- 0-130V continuously variable output
- Separate input and output fuses for double protection
- Rugged, portable design

Part No.	Description	Price
01PS1510	10 Amp Model	$345.00
01PS1515	15 Amp Model	425.00

RSR

VARIABLE AC TRANSFORMER

5 AMP AND 10 AMP MODELS

- **Input Voltage:** 110V; 5' cord with 3 prong plug
- **Output Voltage:** 0 to 130 VAC
- **Output Current:** 5 Amp / 10 Amp
- Analog Voltmeter, 3 prong output socket
- **Weight:** Model 520T-05 – 8 lbs.
  Model 520T-10– 14 lbs.

Part No.	Description	Price
16VA520T05	5A, Variable AC Voltage	$105.00
16VA520T10	10A, Variable AC Voltage	129.00

Global® Specialties

POWER SUPPLY AC/DC– VARIABLE

MODEL 1315

Rugged general purpose supply offering either AC or DC variable outputs of 0-25V @ 0-5 amps. This unique power supply is a low-cost space-saving solution for applications requiring both AC and DC voltages, covering a wide range of testing situations.

- 0-25V @ 5 amp variable AC or DC output
- AC or DC selection switch
- Input surge suppressor input fuse protected and output overload trip
- Power on/off switch with power on LED indicator
- Heavy duty transformer
- Regulated AC 10%
- DC Ripple ≤1V

Part No. 01PSGS1315 • Price $335.00

GLOBAL SPECIALTIES®

AC POWER SUPPLY

TRIPLE ISOLATED ADJUSTABLE AC SUPPLY with Current Indication and Line Leakage Tester

MODEL 1504 – SINGLE RANGE 0-150VAC @4A

MODEL 1505 – DUAL RANGE 0-15-VAC @ 4A; 0-260VAC @ 2A

- Triple isolated continuously variable AC output
- Variable from 0-150VAC @ 0-4A
- Power line leakage current measurement facility
- 3 digit DPM for high accuracy
- Capacitive coupling less than 0.0005pF
- Galvanic leakage less than 10 A
- 120dB attentuation for common mode noise

Model 1504

Model 1505

Part No.	Description	Price
01PS1504	Single Range	$420.00
01PS1505	Dual Range	595.00

RSR

AC/DC POWER SUPPLY

2A/4A MODELS

- **AC and DC outputs (DC regulated)**
- **DC output 1.5 to 24V in 11 steps**
- **AC output 2V to 24V in 11 steps**
- **Protection:** DC output current limit, AC input fuse
- **DC Line Regulation:** 3%
- **DC Load Regulation:** 5%
- **DC Ripple Voltage:** 10mV
- **Dimensions:** 200(W) x 220(D) x 155(H) mm 7.9(W) x 8.7(D) x 6.1(H) inches
- **Weight:** 24 lbs (2A Model); 18 lbs. (4A Model)

Part No.	Current	Price
01PSACDC1	2A	$95.00
01PSACDC2	4A	105.00

AC/DC POWER SUPPLY

- Both AC and DC output (DC regulated)
- Output 1–15V in 15 steps
- Overcurrent protection
- Transformer thermal protection
- **DC Load and Line Regulation:** 1% ea.
- **Input Voltage:** 110-127V AC

Part No.	Output Current	Price
01PSM10AD350M-5	5A	$175.00
01PSM10AD350M-10	10A	210.00

BK PRECISION

AC POWER SUPPLY

MODEL 1653A

- Variable isolated 0-150V AC, 2 A continuous
- Displays voltage or current readings
- Isolation transformer to eliminate shock hazard
- Compact & rugged

Part No. 01PS1653 • Price: $349.00

BK PRECISION

AC POWER SUPPLY

MODEL 1655A

- Variable isolated 0-150V AC, 3 A continuous, 4 A intermittent
- Power line leakage tester
- Circuit breaker overload protection
- Displays volts, amps, VA, leakage

Part No. 01PS1655 • Price: $579.00

POWER SUPPLY DC
3V TO 12V @ 2A

- Fixed DC output of 3V, 4.5V, 6V, 7.5V, 9V, 12V
- Size 6" x 4" x 2.2"
- Wt: 1 lb.

Part No.	Description	1-9	10+
01PS28	3 to 12V @ 2A	$18.90	$17.90

RSR TRIPLE OUTPUT POWER SUPPLY
ENHANCED DISPLAY FEATURES
HIGH RELIABILITY AND QUALITY
MODELS PW3033 AND PW3066

Four digital displays enable user to measure both voltage outputs (green) and both current outputs (red) at the same time. Sleek, easy viewing design.

- Two 0 ~ 30V, 0-3A outputs and one 5V fixed, 0 ~ 3A output.
- Large, green digital displays measure voltage. Red displays for current. Accuracy <0.1% + 2 digits.
- 0.01% voltage regulation.
- Ripple and noise <1mVrms.
- LED indicators for series and parallel operation.
- Hide-a-way carry handle. High efficiency heatsink.
- Torroidal transformer version available

Part No.	Description	Price
01PSPW3033	Model 3033	$345.00
01PSPW3066	Toroidal Xfrmr Version	425.00

RSR DC POWER SUPPLY
TWO OUTPUT UNIT
ENHANCED DISPLAY FEATURES
HIGH RELIABILITY AND QUALITY
MODELS PW3032 AND PW3044

Sleek, streamline design features large, easy-viewing digital displays in green (volts) and red (amps), for monitoring voltage and current simultaneously. The PW3032 offers both a 0 ~ 30V, 0 ~ 3A output plus a fixed 5V, 0 ~ 3A output. Maximum continual output power 105VA.

- .01% regulation.
- **Ripple and noise:** 3mVrms.
- **Display accuracy:** <0.1% + 2 digits.
- **Dimensions**: W=230m, H=170m, D=310m.
- Power source voltage selectable for both 115V or 220V.
- Torroidal transformer version available

Part No.	Description	Price
01PSPW3032	Model PW3032	$180.00
01PSPW3044	Toroidal Xfrmr Version	210.00

RSR DC POWER SUPPLY VARIABLE
LED DISPLAY – 0–50V; 0–3A

- Constant voltage and constant current operation
- **Voltage Adjustable** 0 to 50V
- **Current Adjustable** 0 to 3A
- **Load Regulation:** 2mV
- **Current Regulation:** 3mA
- **Weight:** 14 lbs.

Part No. 01PSSP503E • Price: $145.00

RSR DC POWER SUPPLY
MODEL NO. 3010 / 3040

The 3010 DC Power Supply features 3 regulated DC supply outputs. One output is fixed and 2 are continuously variable. All 3 supplies are fully current limited and shortcircuit protected. Available assembled or in kit form.

SPECIFICATIONS:

Fixed Output:
5V DC at 3 amps maximum,
- line regulation of 0.2%,
- load regulation of 1% with a maximum ripple of 10mV p-p.

Variable Output:
1.5V DC to 15V DC at 1 amp maximum, line regulation of 0.5%, load regulation of 1% with maximum ripple of 10mV p-p.

MODEL NO. 3040

With extra 30VAC OT output. Available only as a kit.

Part No.	Price
01PS3010A (Assembled)	$79.00
01PS3010K (Kit)	67.90
01PS3040K (Kit) (w/extra 30V AC Output)	73.90

RSR HIGH CURRENT VARIABLE SWITCHING MODE SUPPLIES
MODEL HY3010 – 10 AMP UNIT (0-30V)
MODEL HY3020 –20 AMP UNIT (0-30V)

- Variable DC volts 0~30 volts
- Variable current:
  0 ~10 Amp *(HY3010)*
  0 ~20 Amp *(HY3020)*
- LED digital displays for both current and voltage
- Constant voltage and current operation
- Current limiting and short circuit

Part No.	Description	Price
01PHSY3010	10 Amp High Current Supply	$149.00
01PHSY3020	20 Amp High Current Supply	266.00

DC POWER SUPPLY
REGULATED, MULTI VOLTAGE

MW122A

- Input 110/120V AC
- Multi-voltage output: 3, 4.5, 6. 7.5, 9, 12V DC with rotary selector
- Provides constant current from 0–2A
- Short circuit protection, auto thermal cut off
- Red/black binding posts for easy connection
- $3\frac{3}{4}$" x $4\frac{1}{4}$" x $2\frac{5}{8}$"; 2.9 lbs. compact regulated power supply
- Optional 6' cable with assorted coaxial plugs

48-400 *(opt.)*

Part No.	Description	Price
01MW122A	Regulated Supply	$24.90
0148-400	Power Cord & Plug Set	3.95

RSR TRIPLE OUTPUT DC POWER SUPPLY

Best Value!

LED DISPLAY

***MODEL HY3002-3* – 0–30V; 2A**
***MODEL HY3003-3* – 0–30V; 3A**

- Two 0-30V; variable voltages *(Models HY3002-3 and HY3003-3)*
- **Variable Current:** 0–2Adc *(Model HY3002-3)* 0-3Adc *(Model HY3003-3)*
- Serial and parallel operation for double of normal outputs.
- 5V@ 3 A fixed output. *(Both Models)*
- **Load Effect**: .01% +5mV
- **Source Effect:** .02% +1mV
- Current limiting and short circuit protection.
- LED display
- **Dimensions:** 14.3" x 10.5" x 6.5"
- **Weight:** ~26 lbs.

Part No.	Description	Price
01PHSY3002-3	Two 0-30V @ 0-2A +5V @ 3A Fixed	$158.00
01PHSY3003-3	Two 0-30V @ 0-3A; +5V @ 3A Fixed	184.00

RSR TRIPLE OUTPUT POWER SUPPLY

TWO 0-30V; 0-5A
5V @ 3A FIXED

LED DISPLAY

- Two 0-30V; 0-5A variable output.
- Serial and parallel operation for double of normal outputs.
- 5V @ 3 A fixed output.
- **Load Effect**: .01% +5mV
- **Source Effect:** .02% +1mV
- Current limiting and short circuit protection.
- LED display
- **Dimensions:** 14.3" x 10.5" x 6.5"; **Weight:** ~26 lbs.

Part No.	Description	Price
01PHSY3005-3	Two 0-30V @ 0-5A; +5V @ 3A Dual Displays	$225.00
01HY3005F-3	Two 0-30V @ 0-5A; +5V @ 3A Quad Displays	$235.00

QUAD POWER SUPPLY

- One variable & Three fixed supplies
- 0 to 20V @ 2A; +5V @ 3A; +12V @ 1A and -12V @ 1A
- Fully regulated + short circuit protected
- Voltage + current meters

Part No. 01QPS1 • Price $85.95

RSR VARIABLE DC POWER SUPPLIES

LED/LCD DISPLAY

***MODEL HY3003* – 0–30V; 3A**
***MODEL HY3005* – 0–30V; 5A**

- Voltage Adjustable 0-30V ***(Models HY3003 & HY3005)***
- Current adjustable 0-3 Amp ***(Model HY3003)***
- Current adjustable 0-5 Amp ***(Model HY3005)***
- LED displays for both current and voltage.
- Constant voltage and current operation.
- **Load Effect:** .01% 5mv
- **Dimension:** 11" x 6.3" x 5.3"
- **Weight:** ~13 lbs.

Part No.	Description	Price
01PHSY3003	Voltage 0-30V; Current 0-3A LED display	$95.00
01HY3003D	Voltage 0-30V; Current 0-5A LCD display	$105.00
01PHSY3005	Voltage 0-30V; Current 0-5A LED display	115.00
01HY3005D	Voltage 0-30V; Current 0-5A LCD display	125.00

RSR VARIABLE DC POWER SUPPLY

LED DISPLAY
0-50V; 3A

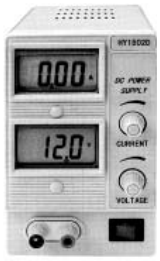
- Adjustable voltage (0-50V).
- Adjustable current (0-3A).
- LED displays for both current and voltage.
- Constant voltage and current operation.
- **Load Effect:** .01% 5mv
- **Dimension:** 11" x 6.3" x 5.3"
- **Weight:** ~13 lbs.

Part No.	Description	Price
01PHSY5003	Voltage Variable 0-50V; Current Variable 0-3A	$125.00

RSR VARIABLE DC POWER SUPPLY

LCD DISPLAY

MODEL HY1802D – 0-18V; 0-2A
MODEL HY1803D – 0-18V; 0-3A



- **Voltage Adjustable:** 0–18Vdc
- **Current Adjustable:** 0–2A ***(HY1802D);*** 0-3A ***(HY1803D)***
- Constant voltage or current operation
- LCD displays both current and voltage
- Current limiting and short circuit protection.
- **Load Effect:** ≤ 0.01% + 5mV
- **Dimensions:** 9" x 6.3" x 3.7"
- **Weight:** ~10 lbs.

Part No.	Description	Price
01PHSY1802D	0-18V; 0-2A	$58.95
01PHSY1803D	0-18V; 0-3A	68.95

BK PRECISION

POWER SUPPLY

TRIPLE OUTPUT DIGITAL

MODEL 1652

- Two 0 to 24V DC variable outputs (0.5A)
- One fixed 5V output @ 4 amps
- Independent or tracking operation
- Designed to operate continuously at rated output
- Short circuit, overload and reverse polarity protection
- Connect outputs in series for higher output voltage or parallel for higher output current (switch selectable)
- Easy to read digital meter that displays voltage or current
- **Dimensions:** 5.5" x 6.0" x 10.5"; **Wt.:** 12 lbs.

Part No. 01PS1652 • Price $479.00

BK PRECISION

DC REGULATED POWER SUPPLIES

***MODEL 1665* – 1 ~ 20V, 0 ~ 10A**
***MODEL 1666* – 1 ~ 40V, 0 ~ 5A**
***MODEL 1667* – 1 ~ 60V, 0 ~ 3.3A**

Model 1666

- Digital display read-out
- Over voltage protection
- Constant voltage/current operation
- Preset current limiting
- Short circuit temperature
- 90 ~ 265VAC 50/60 Hz input voltage

Part No.	Description	Price
01BKPS1665	20V, 10A	$269.00
01BKPS1666	40V, 5A	269.00
01BKPS1667	60V, 3.3A	269.00

BK PRECISION

DIGITAL DC POWER SUPPLY

0–35V, 0–10A

MODEL 1745A

- Four digit LED display that allows you to see 10mV and 1mA resolution
- Output shorting button that allows the user to short the output terminals to set the current limit
- **Dimension:** 5.7" x 10.5" x 15"
- **Weight:** 27 lb. (12.25 kg) approximately

Part No. 01BK1745 • Price $749.00

BK PRECISION

POWER SUPPLY TRIPLE OUTPUT

MODEL 1651A

- Two 0 to 24 VDC outputs (0.5A)
- One fixed 5V output (4A)
- Independent or tracking operation
- Adjustable current limiting
- Designed to operate continuously at rated output
- Short circuit, overload, and reverse polarity protection
- Connect outputs in series for higher voltage output or parallel for higher current output (switch selectable)

Part No. 01PS1651 • Price: $469.00

BK PRECISION

POWER SUPPLY TRIPLE OUTPUT

MODEL 1760A

- Two 0-30V DC, 2A sections capable of independent, series or parallel operation
- One 4-6.5V DC, 5A section
- Switchable series/parallel operation on 30V sections
- Adjustable current limit controls on 30V sections
- Two 3-digit LED displays
- Unique variable tracking, B tracks A at 5% to 100%

Part No. 01PS1760 • Price: $679.00

BK PRECISION

POWER SUPPLIES

- All models are backed by BK Precision's 2-year warranty
- All models have short circuit protection, overload protection, reverse polarity protection, thermal protection & current limiting
- All models have CV & CC operation
- Excellent regulation & very low ripple
- Operate continuously at full load without overheating
- Coarse & fine voltage controls

Models 1715A 1735A

Models 1710A, 1730A

Part No.	Model	Description	Price
01PS1710	1710A	0-30V DC, 0-1A, analog readout	$265.00
01PS1715	1715A	0-60V DC, 0-2A, LED readout	435.00
01PS1730	1730A	0-30V DC, 0-3A, analog readout	349.00
01PS1735	1735A	0-30V DC, 0-3A, LED readout	409.00
01PS1740	1740B	0-60V DC, 0-4A, analog readout	569.00
01PS1743	1743B	0-35V DC, 0-6A, LED readout	569.00
01PS1746	1746B	0-16V DC, 0-10A, analog readout	495.00

Model 1746B

GW INSTEK POWER SUPPLIES

- Light compact design
- 0.01% regulation
- Constant voltage and constant current operation
- Series or parallel operation function
- Low ripple and noise (≤0.5mVrms)
- Overload and reverse polarity protection
- Analog — voltmeter and ammeter
- Digital — 3½ Digit 0.5" LED display
- "DD" model – Two digital displays enables viewing of voltage and current at the same time

Model 3030D

Part No.	Description	Price
01PS1830D	0–18VDC, 0–3A; Digital	$189.00
01PS1850D	0–18VDC, 0–5A; Digital	189.00
01PS3030D	0–30VDC, 0–3A; Digital	189.00
01PS3030DD	2 Digital Displays; 0-30VDC, 0-3A	225.00

GW INSTEK POWER SUPPLY

10 AMP 0–18 VOLT

MODEL GPR1810 HD

- Adjustable Output 0-10 Amp; 0-18 Volt
- 0.01% Regulation
- Constant Voltage / Current Operation
- Continuous or Dynamic Load
- Low Ripple and Noise
- Overload and reverse Polarity Protection
- Digital Display (3½ Digit, 0.5" Ht.)
- 2 Year Warranty

Part No. 01GPR1810HD • Price: $360.00

GW INSTEK DC SWITCHING SUPPLIES

HIGH CURRENT

- Three Models
  SPS1820 0-18V 0-20A
  SPS3610 0-3V 0-10A
  SPS606 0-60V 0-6A
- Compact, light (7 lb.), efficient
- Lower power consumption, high output
- .01% regulation
- Cool operation. Temp coefficient ≤ 100ppm/ C
- Both voltage and current may be displayed at the same time
- Overload and reverse polarity protection

Part No.	Description		Price
01SPS1820	0-18V	0-20A	$495.00
01SPS3610	0-36V	0-10A	495.00
01SPS606	0-60V	0-6A	495.00

RSR DUAL OUTPUT DC POWER SUPPLIES

MODELS 3003LK-2, 3005LK-2, 6003LK-2

0–30V / 0–60V; 0–3A / 0–5A
+5V @ 1A fixed

- Two digital panel meters (LED)
- Constant voltage and current operation
- Output switch off function (output standby)
- Overload and reverse polarity protection
- High power density

Part No.	Description	Price
01PSM3003LK2	0–30V; 0–3A; 5V@1A Fixed	$119.00
01PSM3005LK2	0–30V; 0–5A; 5V@1A Fixed	135.00
01PSM6003LK2	0–60V; 0–3A; 5V@1A Fixed	145.00

RSR VARIABLE DC POWER SUPPLY

ANALOG DISPLAY

MODEL 3003M, 3005M

0–30V; 0–3A/0–5A; +5V @ 1A fixed

- Two analog panel meters
- Constant voltage and constant current operation
- Overload and reverse polarity protection
- High power density

Part No.	Description	Price
01MP3003M2	0–30V; 0–3A; 5V@1A Fixed	$90.00
01MP3005M2	0–30V; 0–5A; 5V@1A Fixed	145.00

VIZATEK DC POWER SUPPLIES

LED DISPLAY

MODELS 6003L-1, 6005L-1

0–60V; 0–3A / 0-5A

6003L-1

- Adjustable Voltage: 0–60V
- Adjustable Current: 0–3A or 0-5A
- Constant voltage and current operation
- Overload and reverse polarity protection
- High power density

6005L-1

Part No.	Description	Price
01PSM6003L1	0-60V; 0-3A	$130.00
01PSM6005L1	0–60V; 0–5A	205.00

POWER SUPPLIES

GP4303D

GP305

- Compact size and light weight
- Digital or analog metering
- Built-in current limiting
- Overload protection circuit
- Constant voltage and constant current operation

Part No.	Description	Price
01PSGP4303D	0 – 30V DC, 0 – 3A, Digital	185.00
01PSGP305	0 – 30V DC, 0 – 5A, Analog	295.00

BK PRECISION HIGH CURRENT DC POWER SUPPLIES – FIXED

Ideal for powering ham radios, cellular phones, car stereos, and other mobile electronics

- 13.8 volts DC output (fixed)
- Current foldback overload protection
- Short circuit protection
- Reverse polarity protection

Model 1680

MODEL 1680
- 6 amps peak
- Convenient cigar lighter output

MODEL 1682A
- 15 amps peak
- Thermostatically controlled cooling fan

Model 1682A

Part No.	Price
01PS1680	$59.00
01PS1682	135.00

BK PRECISION HIGH CURRENT DC POWER SUPPLIES

MODEL 1794 – 0~32V, 0~30A
MODEL 1795 – 0~64V, 0~15A
MODEL 1796 – 0~16V, 0~50A

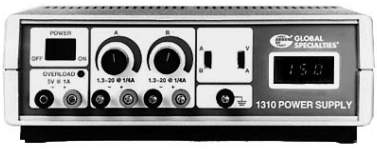
High power, regulated DC power supplies. Linear high current supplies for bench or 19" rack operation. Clean power for high current circuits.

- Constant voltage, constant current
- Remote programming and sensing facility
- Output voltage and max pre-set feature
- Current load limits
- Separate DC output ON/OFF switch
- High stability and close regulation 0.01%
- Meets CE specifications
- Wt. 62 lbs.

Part No.	Description	Price
01BKPS1794	BK Model 1794	$1,895.00
01BKPS1795	BK Model 1795	1,895.00
01BKPS1796	BK Model 1796	1,895.00

GLOBAL SPECIALTIES® TRIPLE POWER SUPPLY

MODEL 1310



- Triple outputs +5VDC and two 1.2-20VDC
- +5VDC @ 1A, variable supplies 0.25A each
- Most economical bench power supply on the market
- LED readout for voltage or current on either variable supply
- External short circuit will not damage supplies
- All supplies are floating and transformer isolated
- Connect two supplies in parallel to double output current
- Connect two supplies in series to double output voltage

Part No. 01PS1310 • Price: $195.00

BK PRECISION 4 DIGIT TRIPLE POWER SUPPLY

0–35V (2) @ 3A; 2V–6.5V@5A – *MODEL 1761*

BK Precision's new Model 1761 Triple Output DC Power Supply offers two outputs with 0 to 35V, 0 to 3A and one 2 to 6.5V, 0 to 5A output with two 4 digit LED displays. The 4 digit LED displays offer 10mV and 1mA resolution which provide higher accuracy. This makes it an ideal supply for power sensitive applications. The 1761 is fully overload protected and comes with a two year warranty.

- Continuously monitor voltage and current output on two 4-digit LED displays
- Connect two supplies in parallel to double the current output
- Connect two supplies in series to double the voltage output
- Reliable, Durable
- Operate continuously at full load without overheating
- Fully overload protected
- Coarse and fine voltage controls
- Excellent regulation
- Very low ripple
- Constant voltage or constant current operation

Part No. 01BK1761 • Price: $709.00

BK PRECISION DC POWER SUPPLIES

1620A SERIES MODELS

- Full overload protection: current limiting, reverse polarity, overvoltage, short circuit.
- Constant voltage / current.
- Low ripple and noise.
- Operation at full current without over-heating.
- Series or parallel connection.
- Coarse and fine voltage controls.
- Analog and digital models.

Part No.	Description			Price
01PS1621	0-18V	0-5A	Digital	249.00
01PS1623	0-60V	0-1.5A	Digital	245.00
01PS1627	0-30V	0-3A	Digital	265.00

BK PRECISION TRIPLE OUTPUT DC POWER SUPPLY – *MODEL 1670A*

IDEAL FOR GENERAL ELECTRONIC SERVICING, SCHOOL ELECTRONICS LABS, AND POWERING UP HOBBYISTS PROJECTS

- One variable 0-30 VDC, 2.5 A section
- One 12 VDC fixed section
- One 5 VDC fixed section

Part No. 01PS1670 • Price: $188.00

BK PRECISION TRIPLE OUTPUT POWER SUPPLY

QUAD DISPLAY – *MODEL 1672*

- Two 0-32V DC variable (0 to 3A) and one fixed 5V @ 3A.
- Independent control of voltage and current.
- CV/CC operation.
- Series tracking and parallel mode operation for triple output unit.
- Four separate 3-digit displays for voltage and current.
- Overload indication LED for fixed output.
- LED indication for CV (green) / CC (red) mode.
- Features current limiting, reverse polanty, over voltage and short circuit protection.
- Dimensions: 178mm x 310mm x 230mm; Wt. 7.48 kg.

Part No. 01BK1672 • Price: $489.00

GW INSTEK PROGRAMMABLE, LINEAR POWER SUPPLIES

GPD 2303S - two output, 1mV resolution
CH1: 0~30V, 0~3A CH2: 0~30V, 0~2A
GPD 3303S - Three output, 1mV resolution
CH1: 0~30V, 0~3A CH2: 0~30V, 0~2A; CH3: 2.5/3.3/5.0V, 0~3A
GPD 3303D - three output, 100mV resolution
CH1: 0~30V, 0~3A CH2: 0~30V, 0~2A CH3: 2.5/3.3/5/5.0V, 0~3A
GPD 4303S - four output, 1mV resolution CH1: 0~30V,0~3A CH2: 0~30V, 0~2A CH3: 2.5/3.3/5.0V, 0~3A CH4 0~5V, 0~1A

- Programmable, Linear DC power supplies. High resolution models with 2, 3 and 4 output options for your selections.
- USB interface, 4 LED display sets
- Tracking series and parallel modes
- Min resolution 1mV/1mA all models but GPD3303D 100mV 10mA
- Key-lock, warning buzzer
- Save, recall panel settings and via USB remotely control for specific application needs
- Coarse and fine control

Part No.	Description	Price
01GPD2303S	Two output, 1mV, 180W	$385.00
01GPD3303S	GPD3303S – 1mV Resolution	$475.00
01GPD3303D	GPD3303D – 100mV Resolution	395.00
01GPD4303S	Four output, 1mV, 195W	545.00
01GTL242	USB Cable	9.90

INSTEK PROGRAMMABLE DC POWER SUPPLIES HIGH CURRENT

PSW 30-36
PSW 80-13.5
PSW 160-7.2

PSW 30-72
PSW 80-27
PSW 160-14.4

PSW 30-108
PSW 80-40.5
PSW 160-21.6

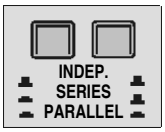
The PSW-Series is a single output multi-range programmable switching DC Power Supply covering a power range up to 1080W. This series of products include six models with the combination of 30V and 80V rated voltages and 360W, 720W and 1080W maximum output powers. The multi-range feature allows the flexible and efficient configuration of voltage and current within the rated power range. As the PSW-Series can be connected in series for maximum 2 units or in parallel for maximum 3 units, the capability of connecting multiple PSW-Series units for higher voltage or higher current output provides a broad coverage of applications.
The C.V./ C.C. priority selection of the PSW-Series is a very useful feature for DUT protection. The conventional power supply normally operates under C.V. mode when the power output is turned on.
The OVP and OCP protections are provided with the PSW-Series. Both OVP and OCP levels can be selected within the range of 10% to 110%, with default level set at 110%, of the rated voltage/current of the power supply. When any of the protection levels is tripped, the power output will be switched off to protect the DUT. The PSW-Series provides USB Host/ Device and LAN interfaces as standard and GPIBUSB adaptor as optional.
An analog control / monitoring connector is also available at the rear panel for external control of power On / Off and external monitoring of power output Voltage and Current.

FEATURES:

- Programmable DC power supplies
- 60W, 720W and 1,080W units
- 30V, 80V, 160V models
- Adjustable slew rate
- Series and parallel operation
- USB device, LAN interface
- GPIB- USB option
- Labview supported

Part No.	Description	Price
01PSW30-36	0~30V, 0~36A, 360W	$1,490.00
01PSW30-72	0~30V, 0~72A, 720W	1,820.00
01PSW30-108	0~30V, 0~108A, 1080W	2,365.00
01PSW80-13.5	0~80V, 0~13.5A, 360W	1,490.00
01PSW80-27	0~80V, 0~27A, 720W	1,820.00
01PSW80-40.5	0~80V, 0~40.5A, 1080W	2,365.00
01PSW160-7.2	0~160V, 0~7.2A, 360W	1,490.00
01PSW160-14.4	0~160V, 0~14.4A, 720W	1,820.00
01PSW160-21.6	0~160V, 0~21.6A, 1080W	2,365.00
01PSW001	Accessory kit for PSW series	45.00
01PSW002	IDC tool for PSW series	210.00
01PSW003	Contact removal tool for PSW series	15.00
01PSW004	Basic accessories for PSW series	15.00
01PSW005	Cable for series mode	55.00
01PSW006	Cable for 2 sets parallel mode	55.00
01PSW007	Cable for 3 sets parallel mode	85.00

GW INSTEK GPS SERIES MULTI-OUTPUT DC POWER SUPPLIES



- Models available with two, three and four outputs
- High quality, affordable pricing
- Quad, 3 digit LED displays for simultaneous viewing of 2 channels
- Channel viewing is front panel switch selectable. Voltage displayed in green, current in red
- Stable and clean power. 0.01% load and line regulation. Low ripple and noise
- Tracking operation and automatic series/parallel feature extend ratings to 60V / 3 Amp and 30V / 6 Amp
- Overload/reverse polarity protection
- Input voltage selectable 110V/120V, 220V/230V

Model GPS 2303

Model GPS 3303

Model GPS 4303

MODEL GPS 2303 – TWO independent, variable voltage and current ***outputs***. Two variable 0 ~ 30V, 0 ~ 3A outputs. Operating in series mode doubles voltage output rating to 0 ~ 60V, while operating in parallel mode doubles current rating to 0 ~ 6 Amp.
MODEL GPS 3303 – THREE independent voltage and current ***outputs.*** Two variable 0 ~ 30V, 0 ~ 3A outputs, plus a Fixed 5V @ 3 A channel. Operating in series mode doubles voltage on variable channels to 0 ~ 60V, while parallel mode offers 0 ~ 6 Amp current rating.
MODEL GPS 4303 – FOUR independent, voltage and current ***outputs***. Two variable 0~30V, 0 ~ 3A outputs, plus two additional channels. Channel 3 offers variable voltage 2.2V ~ 5.2V @ 1 Amp fixed, and channel 4 is variable voltage 8V ~ 15V @ 1 amp fixed.

Part No.	Description	Price
01GPS2303	(2) 0 ~ 30V, 0 ~ 3A Outputs	$355.00
01GPS3303	(2) 0 ~ 30V, 0 ~ 3A Outputs (1) 5V @ 3A Fixed Output	395.00
01GPS4303	(2) 0 ~ 30V, 0 ~ 3A Outputs (1) 2.2V ~ 5.2V @ 1A Fixed (1) 8V ~ 15V @ 1A Fixed	420.00

GW INSTEK TRIPLE OUTPUT POWER SUPPLIES – *GPC MODEL SERIES*

STANDARD FEATURES FOR ALL GPC SERIES MODELS

- Triple output, 5V fixed @ 3A (In addition to dual variable outputs)
- Auto tracking
- Auto series and parallel operation
- Low ripple and noise
- Constant voltage / current operation
- Selectable continuous / dynamic load
- Overload and reverse polarity protection

** **3060 and 6030 Models are special order, 8-12 week delivery.***

Part No.	Description	Price
01GPC1850D	(2) 0~18V, 0~5A Outputs, Digital	$435.00
01GPC3030D	(2) 0~30V, 0-3A Output, Digital	435.00
01GPC3060D	(2) 0~30V, 0-6A Outputs, Digital	780.00
01GPC6030D	(2) 0~60V, 0-3A Outputs, Digital	780.00

RSR 12 VOLT 20 AMP REGULATED SUPPLY

WITH CURRENT METER & BUILT-IN COOLING FAN

MODEL PS21KX

- Input: 115VAC, 60Hz, 450W
- Output: 13.8VDC
- 18 Amp constant, 20 Amp surge
- Short circuit, thermal & fuse protected
- Over-voltage/overload protection with auto-reset
- Heavy duty cabinet & heatsink
- Applications: cellular, CB, scanners, ham, lab, shop, hobby

Part No. 01PS21KX • Price $125.00

BK PRECISION PROGRAMMABLE SWITCHING POWER SUPPLIES

MODEL 1696 – 1 ~ 20VDC, 0 ~ 10A
MODEL 1697 – 1 ~ 40VDC, 0 ~ 5A
MODEL 1698 – 1 ~ 60VDC, 0 ~ 3.3A

- RS232 interface, data logging
- Output disable, timer
- Lightweight 6.6 lb.
- Input voltage 90 ~ 265VAC 50/60 Hz
- 25mV ripple and noise, 50mV regulation

Model 1696

Part No.	Description	Price
01BKPS1696	20V, 10A	$375.00
01BKPS1697	40V, 5A	355.00
01BKPS1698	60V, 3.3A	375.00

BK PRECISION HIGH CURRENT, LINEAR POWER SUPPLIES

MODELS 1790, 1791

- Low ripple and noise, excellent regulation up to full current.
- Special features include setting current with simple push of a switch and turning off output without shutting down entire supply (output standby).
- Remote voltage sense, preset current, limiting control.
- LED readout.
- **Ripple and Noise**: 5mV (Peak to Peak)
- **Line Regulation**: 5mV (2% Load)
- **Load Regulation**: 50mV (0–100% Load)

Part No.	Description	Price
01PS1790	0–32V, 0–20 Amp	$1,525.00
01PS1791	0–64V, 0–10 Amp	1,525.00

UNI PROGRAMMABLE TRIPLE OUTPUT POWER SUPPLIES

WITH USB INTERFACE OPTION

Features:

- 3 Amp or 5 Amp models
- USB interface models available
- 2 (0~30V) variable outputs, plus one fixed output selectable at either Four convenient panel save and recall settings
- Minimum resolution: 100mV / 10mA
- Panel lock and output standby functions
- Preset voltage, current and password
- Constant voltage and current, low ripple & noise low temperature drift
- Non-USB models available at lower cost

Part No.	Description	Each
01PS3303USB	3A Programmable PS w/USB	$449.00
01PS3305USB	5A Programmable PS w/USB	499.00
01PSUNI3303	3A version without USB	349.00
01PSUNI3305	5A version without USB	399.00

BK PRECISION DC POWER SUPPLIES

HIGH CURRENT – *MODELS 1685B, 1687B, 1688B*

- USB/ Software for remote control & externally timed programming
- Rotary encoder control knobs for fast settings, dual action push button enables user to set both coarse and fine volt & current levels
- Save up to 3 user-defined presets for easy recall
- Overvoltage, overtemperature &

Part No.	Description	Price
01BK1685B	1~60V,0~5 amp w/ USB/software	$339.00
01BK1687B	1~36V,0~10 amp w/ USB/software	$339.00
01BK1688B	1~18V,0~20 amp w/ USB/software	$339.00
01BK1900	1~16V,0~60 amp	$450.00
01BK1901	1~32V,0~20 amp	$450.00
01BK1902	1~60V,0~50 amp	$450.00

BK PRECISION SWITCHING MODE DC SUPPLY 40A

MODEL 1692

- Variable voltage output 3VDC to 15VDC, or fixed 13.8VDC.
- Up to 40A continuous operation.
- Maximum current output continuously without thermal drifting.
- Compact and light (7.7 lb.). 8.67" x 4.33" x 11.82".
- Highly readable bright red and green digital displays.
- Extensive filtering from RFI. Specifically designed for use with radio equipment. Other applications include car battery substitution for servicing or demonstrating high-power car stereos and cell phone products.

Part No. 01PS1692 • Price: $295.00

QUAD POWER SUPPLY

- One variable & Three fixed supplies
- 0 to 20V @ 2A; +5V @ 3A; +12V @ 1A and -12V @ 1A
- Fully regulated + short circuit protected
- Voltage + current meters

Part No. 01QPS1 • Price $85.95

GW INSTEK PROGRAMMABLE SWITCHING POWER SUPPLY

PSP SERIES

- LCD Display
- Standard RS-232 interface
- High efficiency and power density
- OVP, OCP and OPP protection
- 3 step fan speed control
- On/off output control
- Key lock avoids operation error
- Normal, +% and –% output operation

Model PSP603: 0~60V, 0-3.5A
Model PSP405: 0~40V, 0-5A
Model PSP2010: 0~20V, 0-10A

Part No.	Description	Price
01PSP603	Model PSP603	$295.00
01PSP405	Model PSP405	295.00
01PSP2010	Model PSP2010	295.00

GW INSTEK

PROGRAMMABLE DUAL-RANGE DC POWER SUPPLIES

PSM – SERIES

- Single Output, Dual Range. Max. 200W
- High Resolution: 1mV/1mA
- Stable & Clear Power: 0.01% Load/ Line Regulation, 350 Vrm
- Sensing outputs compensate voltage
- Auto Step running with timer setting & 100 sets memory
- Safety design: OVP, OCP & OTP. Output ON/OFF
- Self Test and Software calibration
- Front and rear outputs, LabView driver
- Both RS232 and GPIB interface standard.
- 100V/120/220V/230V operation, 50/60Hz
- 230(w) x 140(h) x 380(d) mm. Approx. 22 lb

Part No.	Description	Price
01PSM2010	0~8V/20A, 0~20V/10A	$890.00
01PSM3004	0~15V/7A, 0~30V/4A	800.00
01PSM6003	0~30V/6A, 0~60V/3.3A	895.00

GW INSTEK PROGRAMMABLE POWER SUPPLIES

PST / PSS SERIES

PST-Series

PSS-Series

- Digital, programmable interface, high resolution – 10mV, 1mA
- **PST SERIES MODELS *ONLY*** features: large, 192 x 128 LCD window display with variable display mode. Displays several settings and measurement results at the same time. Intelligent Window Operating Interface simultaneously monitors readback value while setting channel voltage, current, OVP and OCP with window setting display. Also provides auto series and parallel function, and supports several direct buttons. All **PST Models** include RS232 Interface.
- Both ***PSS*** and ***PST Series*** include: over-voltage, over-current, over temperature protection, Lab View driver, intelligent fan control (changes by output power), built-in buzzer alarm, 100 memory settings, and IEEE 488.2 and SCPI compatible command set compability. Optional GPIB interface.
- High stability, low drift performance.
- Direct support buttons for fast switching to all settings.
- Optional GPIB Interface.
- RS232 Interface standard on all models *(exceptions: PSS3203GP and PSS2005GP)*
- **GPIB UNITS SPECIAL ORDER**

	Model PST3202	Model PST3201	Model PSS2005	Model PSS3203
Voltage	0-32V x 2, 0-6Vx1	0-32V x 3	0-20V x 1	0-32V x 1
Current	0-2A x 2, 0-5A x 1	0-1A x 3	0-5A x 1	0-3A x 1
OVP	0-33V x 2, 0-7V x 1	0-33V x 3	0-21V x 1	0-33V x 1

Part No.	Description	Price
01PST3201	PST 3201 *(RS232 Only)*	$935.00
01PST3201GP	PST3201GP *(both RS232 and GPIB)*	975.00
01PST3202	PST3202 *(RS232 Only)*	920.00
01PST3202GP	PST3202GP *(both RS232 and GPIB)*	1025.00
01PSS2005	PSS2005 *(RS232 Only)*	495.00
01PSS2005GP	PSS2005GP *(GPIB Only)*	580.00
01PSS3203	PSS3203 *(RS232 Only)*	495.00
01PSS3203GP	PSS3203GP *(GPIB Only)*	580.00

BK PRECISION

PROGRAMMABLE POWER SUPPLIES

INTERFACE CABLE AND SOFTWARE INCLUDED

Model 1788

MODEL 1785B – 0-18V, 0-5A
MODEL 1786B – 0-32V, 0-3A
MODEL 1787B – 0-72V, 0-1.5A
MODEL 1788 – 0-32V, 0-6A

Programmable DC power supplies offering new levels of "ease-of-use" and programming functions. Direct key in entry enables fast voltage and current selection.

- 16 user programmable preset outputs
- Controllable output ON/OFF switch
- 10mV / 10mA setability resolution
- Closed case calibration
- Low ripple and noise
- Excellent temperature stability
- Serial interface cable and software included
- Shipping Wt. 17 lbs.

Part No.	Description	Price
01PS1785	18V, 5A	$355.00
01PS1786	32V, 3A	355.00
01PS1787	72V, 1.5A	355.00
01PS1788	32V, 6A	483.00

RSR 12 VOLT 20 AMP REGULATED SUPPLY

WITH CURRENT METER & BUILT-IN COOLING FAN

MODEL PS21KX

- Input: 115VAC, 60Hz, 450W
- Output: 13.8VDC
- 18 Amp constant, 20 Amp surge
- Short circuit, thermal & fuse protected
- Over-voltage/overload protection with auto-reset
- Heavy duty cabinet & heatsink
- Applications: cellular, CB, scanners, ham, lab, shop, hobby

Part No. 01PS21KX • Price $125.00

BK PRECISION MULTI RANGE DC SUPPLY

60V, 5A, 100/180W

Models 9110 and 9111 are a new type of power supply. Unlike conventional power supplies with fixed output ratings, they automatically recalculate voltage and current limits for each setting, providing any Volt/Amp combination within the rated power. By providing greatly expanded choices of maximum power Volt/Amp combinations, users can cut down on the number of power supplies required and free up valuable bench space.

- Output rating up to 180W within 60V / 8A (model 9111) or 100W within 60V / 5A (model 9110)
- Digitally controlled, multi-ranging output
- 10mV / 1mA resolution over the full range
- Low ripple and noise
- OCP, OVP and OTP protection
- Output On/Off control
- Store and Recall 4 x 100 groups of preset Volt / Amp values
- Wt: 8lbs (9110); 10lbs (9111)

Part No.	Description	Price
01BK9110	60V, 5A, 100W Model 9110	**$260.00**
01BK9111	60V, 8A, 180W Model 9111	**$350.00**

UNI SWITCHING MODE POWER SUPPLIES

30 AMP, 20A, 15A, 10A, 6A MODELS

Features:

- Temperature controller cooling fan
- Constant voltage/ current operations
- Excellent load, line & ripple specs
- 3 digit red, LED displays for both voltage & current
- Coarse & fine voltage controls
- Switching mode design provides high power efficiency
- Short circuit and overload protection

Part No.	Description	Price
01PS1230	30A, 12V switching supply	$489.00
01PS1820	20A, 18V switching supply	489.00
01PS2415	15A, 24V switching supply	489.00
01PS3610	10A, 36V switching supply	469.00
01PS6006	6A, 60V switching supply	469.00

BK PRECISION MODULAR, PROGRAMMABLE LOAD SYSTEM

MDL SERIES

Features multi-channel operation capability, parallel synch of load modules, adjustable slew rates (in CC mode), fast transient mode operation (up to 25KHz), CZ (constant impedance) operating mode and expanded PC connectivity.

Four-slot mainframe may be configured with modules up to 2400W, or with optional mainframe extension up to 4800W. Six different modules available ranging from 200W ~ 600W. Modules are equipped with constant current, voltage, resistance, power and impedance. Mainframe includes standard LAN, USBTMC compliant USB, RS232 and GPIB interfaces that support SCPI command protocol.

Applications: aerospace, military, automotive, solar, medical. Can test DC power sources, batteries, fuel cells and photovoltaic arrays.

The MDL252 is a dual-channel module. User may allocate up to 250W to either channel, with a limit of 300W total (combined).

Part No.	Description	Price
01BKMDL001	MDL Series Mainframe	$1,625.00
01BKMDL002	MDL Series Mainframe Extension	1,250.00
01BKMDL200	80V / 40A / 200W MDL Load Module	1,085.00
01BKMDL252	80V / 20A / 250W 2-Channel Module	2,045.00
01BKMDL305	80V / 20A / 300W MDL Load Module	1,785.00
01BKMDL400	80V / 60A / 400W MDL Load Module	1,615.00
01BKMDL505	500V / 30A / 500W MDL Load Module	2,795.00
01BKMDL600	80V / 120A / 600W MDL Load Module	2,415.00
01BKITE153	Rack Mount Kit for MDL Series	120.00

EXTECH INSTRUMENTS

DC POWER SUPPLY SINGLE OUTPUT

18V/3A ; 30V/1A

Features:
- Constant voltage or current
- Dual backlit LCD displays for voltage and
- Short circuit protection
- Current limiting
- High load/line regulation
- Low noise/ripple
- Banana plug output terminals

Part No.	Description	Price
01EX32200	0-30V + 0-1A	$134.99
01EX32202	0-18V + 0-3A	144.99

EXTECH INSTRUMENTS

DC POWER SUPPLY TRIPLE OUTPUT

0-30V/3A ; FIXED 5V & 12V

Features:
- Adjustable Voltage and Current output
- Easy snap terminals for fixed 5V/0.5A and 12V/1A outputs
- Constant Voltage or Current
- Current limiting indicator
- Overload and short circuit protection
- Binding post terminals for variable supply

Part No. 01EX382213 • Price $209.99

EXTECH INSTRUMENTS

DC POWER SUPPLY 80W

3 SELECTABLE RANGES

Features:
- Performs like 3 power supplies in one
- 3 selectable ranges: 0 to 16V/0 to 5A; 0 to 27V/0 to 3A;
- 0 to 36V/0 to 2.2A
- 4-Digit LED displays
- Front/Rear output terminals

Part No. 01EX382260 • Price $279.99

EXTECH INSTRUMENTS

DC POWER SUPPLY

QUAD OUTPUT; 4 IN 1

Features:
- Two fully adjustable supplies combined with two auxiliary outputs
- Two 0 to 30V/0 to 5A outputs with selectable Constant Voltage and Constant Current modes
- Two auxiliary outputs with fixed current of 3 to 6.5V/3A and 8 to 15V/1A

Part No. 01EX382270 • Price $479.99

BK PRECISION

DC POWER SUPPLY TRIPLE OUTPUT

MODEL 1673

The model 1673 is a Quad Display Triple Output DC Regulated Power Supply that provides one fixed output (5V/ 3A) and two variable outputs (0 to 32V/ 0 to 6A) ratings. The four displays allow the user to continuously monitor the voltage and current values of the two main outputs. The variable outputs can work independently, or in series tracking, or parallel mode.

- Independent control of Voltage and Current for variable output
- CV/CC operation
- Separate 3 digit displays for voltage (Green) and current (Red) • for both variable outputs
- LED indication for CV (Green) and CC (Red) modes
- Overload indication LED for Fixed output
- Series tracking and parallel mode operation
- Output terminals are banana style (not binding posts), click on Accessories for leads

Part No.	Description	Price
01BK1673	Triple Output DC Power Supply	$759.00

BK PRECISION

DC POWER SUPPLY WITH REMOTE SENSE

MODELS 1693 / 1694

1693

1694

Switching mode DC power supply provides high current output in a lightweight and compact package. It is suitable for a variety of uses, especially for powering DC operated mobile radio equipment on the bench. Voltage output is variable from 1V to 30V at 30A continuous operation. In addition, a remote sensing terminal is available for use to compensate for voltage drop across load leads. The output voltage level can also be externally controlled via an analog remote control terminal. Bright red and green LED displays provide for an accurate and highly readable indicator of settings.

Part No.	Description	Price
01BK1693	1 — 15V, 60A DC Power Supply	$449.00
01BK1694	1 — 30V, 30A DC Power Supply	449.00

TRIPLETT AC VOLTAGE DETECTOR

MODEL 9600

- Easy and economical way to check for AC voltage.
- Safe, non-contact voltage probe.
- Checks 50 to 600V AC.
- Visual (light flashes) and audible (beeper chirps) alerts when AC voltage is present.
- Quickly locates hot and neutral terminals in wire outlet and also locates breaks in wires.
- Five year limited warranty.

Part No.	1-9	10+
01TR9600	$19.95	$18.95

RSR TELEPHONE AND DATA LINE TESTER

- Can remotely test cables that terminate with RJ45 or RJ11 connectors.
- Cable length up to 10,000 yards.
- Gold plated connectors.
- LED bars indicate the test status.
- Powered by 9V battery.
- Can be used for testing: Ethernet, 10 Base-T, EIA/TIA-568A, EIA/TIA-568B, AT&T 258A, Token Ring, USOC8/6/4, DEC JMM.

Part No. 01LAN922 • Price: $58.00

TRIPLETT TELEPHONE/LAN LINE TESTER

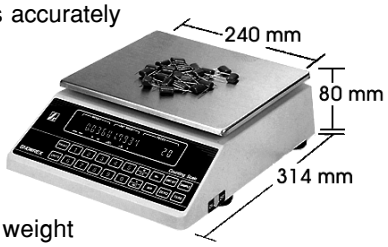
MODEL 9615

- Tests telephone/LAN jacks
- Has both RJ-11 and RJ45 plugs
- 4 tri-color LEDs indicate current polarity and ringing / AC voltage on each line
- Compact design – fits in shirt pocket
- Self powered – no batteries required

Part No.	1-9	10+
34TR9615	$9.90	$8.90

RSR PRECISION COUNTING SCALE

Count and weigh components accurately



- Weight capacity: 5kg
- Resolution – 0.05gm; readability – 0.5gm
- 3 bright digital displays: piece count, unit weight, count weight
- Total weight (5 digits), unit weight (5 digits), total count (6 digits)
- Includes tare/zero,
- Dimensions: 12.3" x 9.5" x 3.2"
- Weight – 12 lbs.
- Powered by 110 VAC or 220 VAC 50/60 Hz

Part No. 03DCS • Price: $399.00

EXTECH BORESCOPE WIRELESS VIDEO WIRELESS INSPECTION CAMERA

3.5" COLOR TFT LCD WIRELESS MONITOR

MODEL BR200/BR250

With a microSD memory card for capturing images (JPEG) or video (AVI) for viewing on your PC

Storage Case Included

FEATURES:

- Captured video with date/time stamp can be played back on the wireless monitor or on any monitor with a video input jack
- Video and images can also be transferred to your PC via the microSD card (with included SD adaptor) or USB cable (included) and viewed using Windows® Multimedia Player
- Mini water-proof (IP67) camera for high resolution viewing
- Two bright LED lamps with dimmer to illuminate viewed object
- Glare-free close-up field of view
- 39" (1m) flexible gooseneck retains configured shape

APPLICATIONS:

- Home inspection: Inspect in walls for mold, insect infestation, electrical wire or water pipe location
- HVAC: Inspect inside ducts, behind motors and compressors
- Automotive: View inside or around engines and transmissions
- Government: Safety and security inspections
- Industrial: Inspect weld integrity, process equipment, gears, molding machines
- Aerospace: Aircraft inspections for contamination, debris, cracks or other damage

Part No.	Description	Price
01EXBR200	9mm Camera Dia	$299.99
01EXBR250	17mm Camera Dia	344.99

EXTECH CIRCUIT BREAKER FINDER

MODEL CB10

- Locates circuit breakers and tests receptacle wiring
- Variable sensitivity adjustment
- Push button GFCI test (receptacle)
- Audible and visual circuit breaker indication

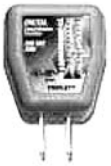
Part No. 01CB10 • Price: $39.99

TRIPLETT CIRCUIT BREAKER LOCATOR

BREAKER SNIFF-IT TYPE 2

MODEL 9650

Opt. Case



- Micro-processor controlled – reduces false readings
- Fully automatic – no adjustments necessary
- 120/220 VAC transmitter (250 VAC Max)
- Audible and visual indication
- Auto power off battery saver
- Uses 1 standard 9-volt alkaline battery *(not included)*
- *UL* listed
- Lifetime warranty
- Padded carrying case *(opt. accessory)*

Part No.	Description	Price
01TR9650	Breaker Sniff-It Type 2	$52.95
01TR10-4250	Padded Carrying Case	18.95

ENERGY CONSUMPTION METER

KILL A WATT™

This allows you to measure energy consumption of appliances simply. Simply connect these appliances to the Kill A Watt™, and it will assess how efficient they really are. Large LCD display will count consumption by the Killowatt-hour, same as your local utility. You can calculate your electrical expenses by the day, week, month, even an entire year. Also check the quality of your power by monitoring Voltage, Line Frequency, and Power Factor.

- Large LCD display
- Cumulative Killowatt-Hour Monitor
- Forecast Your Costs
- Also display Volts, Amps, Watts, Hz, VA
- 0.2% Accuracy

Part No. 01P4400 • Price: $28.95

BK PRECISION PROGRAMMABLE CAPACITANCE SORTING METER

MODEL 890B

The Model 890B Capacitance Meter features a large 4 1/2 LCD with dual display, 11,000 counts resolution, and 9 automatically selected ranges with full scale value from 1.0pF to 50mF. Designed to meet the latest international safety standards, the meter's dedicated chip and microprocessor allow programmable high/low limits or pre-programmed standard capacitor tolerances, making it ideal for measuring values, inspection, sorting capacitors and testing capacitors against standard tolerances. Optional software and cabling is available for PC based data logging and monitoring.

- Dual display simultaneously displays value and deviation from selected tolerance
- Sort on preset tolerance of 1, 5, 10%
- Program unique values to sort for specific circuit applications
- USB PC interface for data logging software available

Part No.	Description	Price
01CT890	Capacitance Sorting Meter	$120.00
01AK80B	Software & USB Cable	58.00

VIZATEK PORTABLE DIGITAL IC TESTER

HAND-HELD UNIT

MODEL VZ4

Best Value!

This unit will readily test TTL, CMOS series ICs. Can identify unknown part numbers.

- Supports the following:
  TTL Series: 7400, 74LS00
  CMOS Series : CD4000, CD4500
- **Display**: 16 characters in 1 line LCD
- **Test Pins:** 14 to 24 pins
- **Power:** 9V battery *(included);* 5V DC-Adaptor *(Optional)*
- **Weight:** 1 lb.
- **Size**: 6.3" x 4.3" x 1.8"

Part No.	Description	Price
01VZ4	Digital IC Tester, Portable	$225.00

RSR LINEAR IC TESTER

PORTABLE

MODEL LP2

- Easy to operate tester, specially designed for linear IC's (op-amps, comparators, opto, regulators, special function devices, transistor arrays).
- Light, compact, low power consumption (battery operated).
- **Average Search Time**: 0.8 seconds.
- **Display:** 16 characters in 1 line LCD
- **Test Pins**: 8 ~ 16 pins.
- **Test Voltage**: 5V
- Equipped with empty-load test. Auto Power Off.
- **Dimensions and Wt.**: 6.3 x 1.8" x 4.4"; 12 oz.

Part No. 01LP2 • Price: $795.00

RSR LINEAR IC TESTER

MODEL ICT-7A

- Reliable desktop design.
- 16 x 1 character 9 x 7 dot matrix LCD display.
- Built-in 6 functions and 10 numerical keys.
- Test Voltage: 5 ~ 24V
- Auto identifies the unknown ICs and lists the same function IC number.
- **Dimensions & Wt.**: 13" x 4" x 12"; 3.3 lbs.
- Test IC: Timer, Op Amp, Comparator, Regulator, Zener Diode, Photo Coupler, Driver, Communication IC, Switching Power Supply IC.

Part No. 01ICT-7A • Price: $2,500

INDUCTIVE TRACER

THE HOUND 3 PROBE

- New headlights help light your way and reduce fluorescent light noise
- Streamline, shielded design to suppress feedback squeal
- Bandpass filter to suppress 60Hz and high frequency noise
- Earphone jack, improved sensitivity, new conductive bill tip
- Adjustable volume/sensitivity control
- High gain, high impedance amp
- LED intensifies as signal gets stronger

TONE GENERATOR

THE FOX

- Generates 3 distinct tones usable for wire tracing
- Line powered in Tone Mode
- LED indicator for continuity
- Supplies "Talk Power" to allow communicating between handsets (talksets) or powering a telephone
- Convenient operation from a standard 9V battery
- One year warranty

Tone Generator
The Fox

The FOX is a lightweight, compact, battery powered instrument designed to perform a variety of tests on telephone lines. Alligator clips and a modular plug allow the FOX to be quickly connected to stripped wires, a terminal panel, or a standard modular jack (single line). Two selector switches set the function of the FOX, while an LED acts as a visual indicator.

Part No.	Description	Price
34TR3392	Hound 3 Probe Only	64.95
34TR3399	Fox 2 & Hound 3 + Case	98.00

TRIPLETT TEST LEADS AND ACCESSORIES

FOR CABLE FAULT FINDERS / TDR

Get More Functionality Out of Your TDR with These High Quality Test Leads and Inductive Tracers

Part No.	Description	Price
34TR79-793	BNC to Spike and Pin Cushion Clip (18" Lead) For use with "TR3271"	$26.95

TONE GENERATOR & PROBE

The Tone Generator is designed to perform a variety of tests on network cable, telephone lines. Alligator clips and testing plug allow the tone generator to be connected to stripped wires, wall plates, a terminal panel, or modular single line jacks quickly. The Probe can trace tone generator signals through wall, wood and many other non-metal surfaces.

TONE GENERATOR:
- Two position switch for single or multi tone signal
- Tri-color LED for line polarity, continuity and voltage testing
- Testing leads and modular cables for individual wire tests or modular jack tests

AMPLIFIER PROBE:
- Non-conductive, inductive tip
- Hi-gain, hi-impedance amplifier
- Sound/visual/both modes for noisy or dark work areas
- Sound with adjustable volume control

Power: 9V batteries. Includes custom carrying case

Part No. 34TGP • Price $49.00

BK PRECISION TONE GENERATOR AND CABLE TRACER KIT

MODEL 262

The ***Model 262*** is a kit that combines the BK Precision ***Model 260*** Tone Generator and ***Model 261*** Cable Tracer.

Tone Generator *Model 260*
The Tone Generator is a hand-held, battery-powered instrument designed to perform a variety of tests on un-energized telephone lines or LAN cables. Alligator clips and a standard RJ11 plug allow the tone generator to be connected to stripped wires, terminal panels, wall plates, or modular single line jacks.

- **Dimensions:** (H x W x D): 7" x 1.87" x 1.12" (177.8 x 47.5 x 28.4 mm)
- **Weight**: 5.8 oz. (164.4 g)
- **Power:** Standard 9-volt battery

Cable Tracer *Model 261*
The Line Tracer is a hand-held inductive tracer that will help to identify wires without piercing the insulation. It can trace Tone Generator signals through dry wall, wood and many other non-metal surfaces.

- Hi-gain, hi-impedance amplifier
- Capable of identifying tones up to 12 inches away (under ideal conditions)
- Rugged, moisture resistant, mylar cone speaker
- **Dimensions:** (H x W x D): 7.37" x 1.87" x 1.12" (187.1 x 47.5 x 28.4 mm)
- **Weight:** 4.9 oz. (138.9 g)
- **Power:** Standard 9-volt battery

Part No. 01BK262 • Price: $74.00

LEAKSEEKER EDS-89

The LeakSeeker 89 locates the exact spot on the pc board (to within a fraction of an inch) where a shorted or leaky component is bringing a power supply bus or data line to ground. It is the only locator that can locate defects from zero to 300 ohms with no loss of resolution. It can even find active shorts that a DVM won't even show. The high GAIN mode can locate shorted components on multi-layer boards with ground planes and a power layer. Amazing!

Part No. 01EDS89 • Price: $235.00

BK PRECISION PARTS TESTER

HAND HELD

MODEL 815

- Tests transisters, SCR's, diodes & LED's
- Measures capacitance & resistance
- Tests batteries under actual loaded condition
- Large 0.8", high contrast LCD readout

Part No. 01CT815 • Price: $105.00

RSR RS-232 BREAK OUT BOX

- Provides quick and easy way to troubleshoot or customize any RS-232 data line
- Line powered
- Rewires RS-232 interface
- Dual state LED monitors both positive and negative levels
- Monitors lines 2, 3, 4, 5, 6, 8, 15, 17, 20 and 24
- 48 test points; 20 jumpers included
- Rugged plastic case

Part No. 03BKBX • Price: $26.90

TRIPLETT CABLE FAULT FINDER TDR

- Low cost digital cable length meter / TDR
- Find cable length or distance to fault from ***ONE END***
- Built-in tone generator for cable tracing and identification
- Simple operation with automatic distance display
- Internal library of 39 standard cable types
- Suitable for testing all types of communication cables.

Part No. 34TR3271 • Price: $225.00

LAN TESTER & CRIMP TOOL + PUNCH TOOL + RJ45 PLUGS (100)

This package includes crimping tool, cable/ LAN tester, wire stripper, punch tool, and 100 pcs of RJ45 modular plugs

Part No. 32LNCTPRJ • Price: $19.95

TRIPLETT WireMaster XR-2

LAN CABLE TEST SET WITH TRACER TONE

- Verifies point-to-point wiring of twisted pair LAN cables, telephone cables and other type cables with RJ-45 and RJ-11 connectors.
- Tests LAN crossover and telephone patch cables.
- Generates 2 distinct warble tones usable for cable tracing.
- Checks continuity in cable conductors.
- 8 LED's identify source and destination of each conductor.
- Checks straight-through, reverse wired and crossover patch cables.
- Remote testing of long cable runs up to 1,000 ft.
- User selectable features include:
  - — RJ-11 4 conductor of 6 conductor test.
  - — Forward or reverse sequencing on transmitter.
  - — High or low pitch tracer tone.
  - — Local or remote test mode on receiver.
- Carrying case included.

Part No. 34CTXR2 • Price: $95.00

TRIPLETT CABLE TESTER-5 TYPES

WIRE MASTER XR-5

FEATURES

- Tests 5 types of cables RJ-45, RJ-11, BNC, 1394, USB
- Simple one button test
- Erognomic portable handheld design
- Tests installed wiring or patch cables
- Remote attaches to main unit
- 600 ft. test distance (RJ-45/RJ-11/BNC)
- Built-in battery test
- LED's indicate connections and faults
- Beeper provides audible annunciation of test results
- Tests shields in 1394 and USB cables
- Test shielded (STP) or unshielded (UTP) LAN cables
- One year warranty

INCLUDES:

- WireMaster XR-5
- BNC terminator
- BNC, RJ-11 and RJ-45 jumper cables
- Carrying case
- 9 volt battery
- Instruction manual

Part No. 34TR3260 • Price: $129.00

RSR TELECOMMUNICATIONS TRAINER

HANDS-ON TELEPHONY, LAN, CATV, FIBER OPTIC EXPERIENCE

MODEL TCM-200

TELECOMMUNICATIONS skills are necessary to succeed today. "TCM-200" introduces you to telephony, cabling, LAN and CATV with one self-contained unit. A comprehensive workbook walks you through the world of telecommunications from the very basic fundamentals of electronics to networks. Priced under $225.00, the TCM-200's innovative design covers more material in less time than units costing *thousands of dollars more.* The TCM-200 delivers the platform to teach the skills your students need **FOR TODAY AND TOMORROW.**

$220.95

** Tools, workbook, supplies and meter available at additional cost*

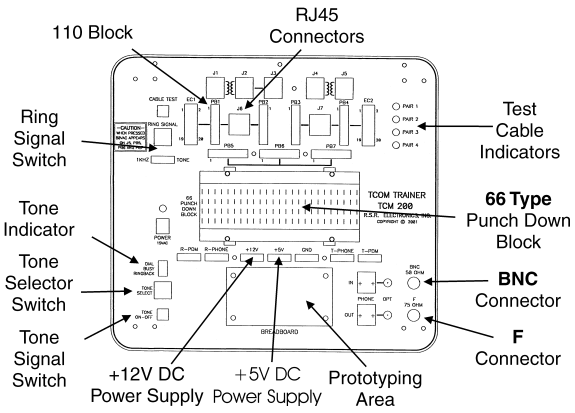
Component and Supplies Kit

Tool Kit

Tool Kit Includes:

- **Punch-Down Tool** – Impact type w/blades for 66 & 110 punch down blocks
- **Crimping Tool** – Deluxe ratchet type with four different dies
- **Wire Strippers –** (3) for coax cable, data / phone cable and hook-up wire
- **Long nose plier**
- **Diagonal cutter**
- **Screwdrivers** (2)
- **Magnifier** – lighted
- **Telephone Set**
- **Tool Box**

Part No.	Description	Price
01TCM200	T-Comm Trainer (TCM-200)	$220.95
3300TCOM200	Lab Manual / Work Book	34.95
3200TCOMCSK200	Component and Supplies Kit	39.95
3200TCOMTK	Tool Kit	119.95



66 PUNCH DOWN BLOCK ..... 25x4 Split Punch Down Block for hands-on training with telephone cabling.

TYPE 110 PUNCH DOWN BLOCK ..... For hands-on training with telephone cabling. These are configured for use in conjunction with and separately from the 66 Block

DIAL TONE ..... "TONE ON-OFF" switch to supply tone selected by "TONE SELECT" switch to RJ11 type J1, J2, J3 and 110 block type PB5, PB6 and PB7.

RING SIGNAL ..... Push-button switch to supply 80VAC, 20Hz ring signal to J5, PB5, PB6 and PB7.

RJ-11 CONNECTORS ..... Use 2 or more telephones for full-duplex communication to simulate a local loop and CO. Use connected Type 110 connectors to test ring, dial, ringback and busy tone signals.

RJ-45 CONNECTORS ..... Use for testing various LAN cables.

CABLE TEST ..... Use with interchangeable PC Boards to test data cables with various pin-out standards. The test results are indicated by 4 LED's.

PROTOTYPING AREA ..... 480 tie-point breadboard.

5V & 12V DC POWER SUPPLY For prototype circuits built on breadboard.

BNC CONNECTOR & F CONNECTOR 50 Ohm / 75 Ohm Terminated for cable assembly instruction and prototyping use with RG58 and RG59 and RG6 cable.

1KHZ TONE ..... Fixed frequency 1KHz TTL clock signal.

RSR

PAD-234 – DIGITAL / ANALOG TRAINER

NEW MODIFIED DESIGN

The PAD-234 Digital/Analog Trainer is a complete portable work-station. It is designed to allow you to quickly build, modify, and troubleshoot all sorts of analog and digital circuits. Its built-in power supplies, signal sources, and I/O features can save hundreds of dollars when compared to using separate pieces of lab equipment. For expanded capability the supplies, signals, and I/O, along with uncommitted lines, are available at a built-in IDC connector to allow ribbon cable connection to other boards, devices, or pieces of equipment.

The PAD-234 is a rugged, high-quality piece of equipment designed for years of use with minimal maintenance. It's functionality and low cost make the PAD-234 a cost-effective design tool for hobbyists and professionals. The same features make it the ideal educational tool for student use. The modular design of the PAD-234 allows it to be incorporated in kit form into progressive quarters of a school's instructional program. Available assembled or in kit form.

FUNCTION GENERATOR:
- Sine, square and triangular buffered outputs
- Amplitude 10V p-p output 5 frequency ranges 1-100KHz
- DC offset adjust

DIGITAL I/O:
- 8 buffered LED indicators
- 8 SPDT toggle switches 0-5V
- 2 debounced momentary switches 0-5V
- Normally Hi and normally Lo levels both available
- TTL level clock slaved to generator: 0-5V, risetime < 400nsec

ADDITIONAL FEATURES:
- 2 breadboards, each with 840 plug-in tie points
- Option to make breadboard moveable.
- Power supplies, function generator, and digital I/O available at built-in IDC connector
- High-impact plastic carrying case
- 3-wire fuse-protected line cord
- 5-way binding posts for power supplies & generator
- Input voltage 110VAC 50–60 cycles

SPECIFICATIONS:

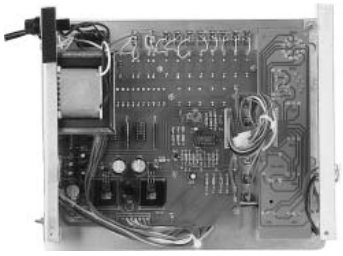
5V Fixed Power Supply
+/- 12V Fixed Power Supplies
+/- 15V Variable Power Supplies
- Output current 1 AMP DC each
- Shortcircuit protected
- 12.6V AC CT Power Supply

Clean Streamlined Interior

• Compact Design on 2 PC Boards
• Neat, Efficient Wiring
• Sturdy Connectors

Part No. 01PAD234K • Price: $125.00
KIT FORM

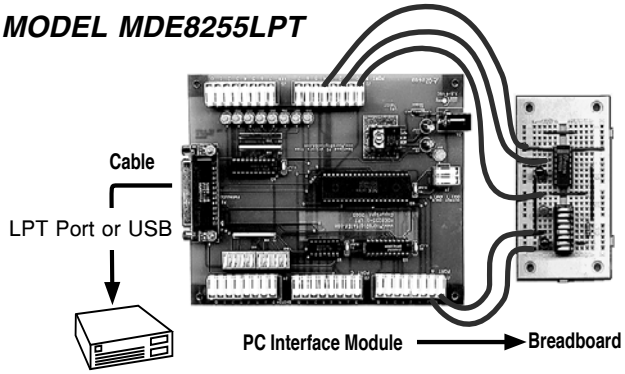
Part No. 01PAD234A • Price: $165.00
ASSEMBLED



PC INTERFACE TRAINER

A RUGGED YET LOW-COST INTERFACE TO THE PC

MODEL MDE8255LPT



This Trainer provides a means of interfacing with the PC via the LPT port. The 8255 Trainer is perfect for both desktop and laptop computers. All it needs is a 9V DC adapter.

Due to the internal structure of MS Windows, separate drivers are required for both Assembly language and Visual C++ environments. To download these drivers, visit the following site: **http://www.microdigitaled.com/**

TRAINER FEATURES

- Can be used for both Desktop / Laptop PCs
- Single 8255 chip
- Ports A, B, C available via terminal blocks
- Onboard TTL power supply
- 8 TTL compatible switches
- 8 LEDs for reading outputs

TEXT BOOK

THE X86 PC: ASSEMBLY LANGUAGE, DESIGN AND INTERFACING

Easy to understand, step-by-step approach to teaching the fundamentals of 80X86 assembly language and PC. This edition has been updated to include coverage of 64-bit microprocessors. Lab experiments can be downloaded from website. Authors Muhammad Mazidi and Janice Mazidi

Part No.	Description	Price
01MDE8255LPT	Trainer MDE8255LPT with Cable and Voltage Adapter	$75.00
045USB-SERIAL	Serial to USB cable	9.95
TEXT BOOK		
31PCC1-010	The x86 PC: Assembly; 5th Edition	130.00

MATRIX INDUSTRIAL ELECTRONIC CONTROLLER – *MODEL MIAC-01*

This can be used to control a wide range of electronic systems. Operates off 12V or 24V. It has 8 analog or digital inputs, 4 high current relay outputs and 4 motor outputs. 4 line LCD display and control keys.

- Programmable from PC using USB port
- Easy to program with flow charts, C or Assembly code
- Free copy of Flowcode (for flow charts)
- LabView and Visual Basic compatible

Part No. 01MIAC01 • Price: $209.40

8051 SINGLE BOARD COMPUTER TRAINER

BASED ON DS89C430 (DALLAS SEMI)

MODEL MDE8051

This development board has a Maxim Semiconductor's ultra-high-speed DS89C450 (64Kbytes) flash memory based 8051 (80C52 compatible) microcontroller installed on a DIP socket. Through the use of an USB connection, a terminal program such as hyperterminal can download the assembled or compiled hex file directly into the DS89C450 and the code you have developed can start running in the trainer right away

MDE-8051 allows beginners to learn 8051 based microcontrollers in a convenient way by providing female and male headers connecting to the I/O ports.
It is very easy to prototype with a breadboard.

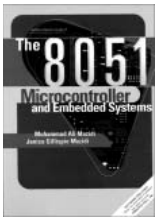
MDE-8051 provides 8 LEDs and a driver to allow users to test I/O port output with minimum effort.
In addition, MDE-8051 has 8 DIP slider switches to let users input logic signals with simply flipping switches.

Using a terminal program, one can program the microcontroller by flipping the slide switch to program or run. A DIP socket allows the programmed microcontroller to be removed for its ultimate application and re-program another chip repetitively.

ADDITIONAL WEB RESOURCES
How to test and program MDE8051
http://www.microdigitaled.com/hardware/8051/using.html
Information about DS89C420:
http://www.maxim-ic.com/quick_view2.cfm/qv_pk/2963
Software Downloads
http://www.microdigitaled.com/software_8051_html.html

TEXT BOOK

THE 8051 MICROCONTROLLER AND EMBEDDED SYSTEMS



This book uses a step-by-step approach to teach the fundamentals of assembly language programming and interfacing of the 8051 microcontroller. Simple, concise examples are utilized to show what action each instruction performs, then a sample is provided to show its application. For anyone interested in learning about the 8051 microcontroller.

Included accessories: Power supply, serial cable for connection to the computer

Part No.	Description	Price
32MT8051	8051 Single Board Computer Trainer	$75.00
31M8051	**TEXT BOOK** - The 8051 Microcontroller and Embedded Systems	136.50

RSR DIGITAL I/O MODULE

KIT / ASSEMBLED

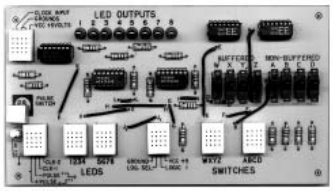
This trainer comes in kit form. It provides all necessary features for experimentation and prototyping of digital circuits. This trainer includes 8-SPDT toggle DIP switches, 8-LED indicators, clock conditioning circuit, two pulse switches, and 26 screwless terminal blocks for easy circuit connection. The kit comes with easy to follow instructions.

Part No.	Price
3200DIGKIT	$27.95
3200DIGASSMB	38.95

RSR DIGITAL TRAINER

MODEL NO. DT3

KIT VERSION ONLY



This Digital Trainer comes in kit form and provides all the functions necessary for digital experimentation and prototyping. The DT3's features include 8 binary switches (4 buffered), 8 LED indicators, a clock conditioning circuit, pulse switch with 0 to + 5V or + 5V to 0V output and 7 board mounted tie blocks for easy circuit connections. The kit comes with easy to follow assembly instructions.

Part No.	Price
3200DT-3	$24.95

velleman USB EXPERIMENT INTERFACE BOARD

The K8055 interface board features 5 digital input and 8 digital output channels. There are also 2 analog inputs and outputs with 8 bit resolution. Number of inputs/outputs can be expanded by connecting up to a maximum of four cards the PC's USB connectors. All communication routines are contained in a Dynamic Link Library (DLL). Write custom Windows (98SE, 2000, Me, XP0 applications in Delphi, Visual Basic, C++ Builder or any other 32-bit Windows application development tool that supports calls to a DLL.

DIAGNOSTIC/TEST SOFTWARE:

— Separate output / input test
— Clear all / set all function
— Counter function on inputs 1 and 2
— Analog output set sliders
— Analog input bar-graph indicator
— Conversion time 20ms per command

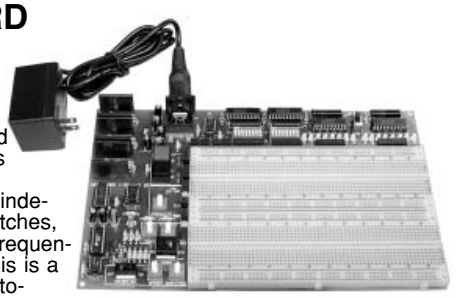
SPECIFICATIONS:

5 digital inputs, 8 outputs
2 analog inputs and outputs
Power supply through USB
Diagnostic software with DLL included
Requirements – Pent. CPU, SB1.0, Windows 98SE, CD ROM player & mouse

Part No.	Description	1-4	5+
32VK8055	Kit Version	$44.95	$39.95
32VKMV110	Assembled Version	79.00	75.00

ANALOG-DIGITAL TRAINER

SINGLE BOARD



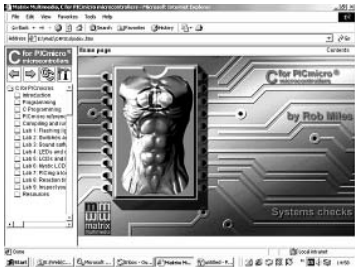
Compact, affordable and practical. Offers all the necessary features for any curriculum requiring electronic lab training and experimentation. Includes a multiple output power supply, signal generator, independent clocks, logic switches, tri-state LED indicators, frequency function and more. This is a powerful training and prototyping tool. Comes complete with 12vdc adapter with din connector to mate directly to board, plus operation manual.

- **Portable:** Easily transported. Large solderless breadboard area (1,640 tie points)
- **Power Supply:** 9V and +5V @ 500ma
- **Digital:** 16 tri-state multi-color ***LED indicatiors*** which remain in a normally lit pattern which alerts user that the LED is functioning (color then changes when in operation). Two ***independent clocks***, 16 ***logic switches***, 2 ***momentary switches***.
- **Analog**: Sine and Square wave generator. Variable amplitude, variable offset, variable frequency to 20K
- Operation manual and power adapter (12V) included
- Optional – 344 page circuit experiment and training book used by leading technical colleges. Emphasizes the relationship between design, analysis and testing. To fully utilize optional Experiment Book including circuit analysis, some additional hardware items (available from ELECTRONIX EXPRESS) and software may be needed.

Part No.	Description	Price
01ADASM	Single Board Analog-Digital Trainer	$74.95
2700MJW70	140 Piece Jumper Wire Kit	3.90
31WI470474341	344 Page Experiment/Training Book	52.95

MATRIX EDUCATION SERIES

"C" FOR PICmicro® MICROCONTROLLERS CD ROM



The C for PICmicro microcontrollers CD ROM is designed for students and professionals who need to learn how to use C to program embedded microcontrollers. It also provides all the software tools needed to actually program a PIC16F84 – including a full C compiler and device programmer that is compatible with the Matrix PICmicro development board.

Although the course focuses on the use of the PIC series of microcontrollers, this CD ROM will provide a relevant background in C programming for any microcontroller. The CD ROM assumes no previous experience of C programming – the only assumed knowledge is an ability to use a web browser and an understanding of basic digital electronics. In addition to the required underpinning knowledge PIC-C includes 9 complete projects, each of which has up to 5 subsections, that take users through the material in a relevant context.

Part No.	Description	Price
01ELPCCST3	"C" PICmicro® Student Vers.	$68.00
01ELPCCSI3	"C" PICmicro® Single User Vers.	115.00
01ELPCC103	"C" PICmicro® 10 User Vers.	420.00

RSR HANDY UNIVERSAL WRITER

MODEL LP-48

This advanced, portable unit is competitively priced and supports: EPROMs, EEPROMs, FLASH EPROMs, Serial E/EPROMs, NV RAMs, Micro-Controllers, DSP, PLDs...

- Comes complete with USB cable, CD-ROM software and power adapter
- 48 Pin ZIF socket accepts DIP devices up to 48 pins, and both 200-600 mil width
- Fast programming – takes only 30 seconds for 16M bit FLASH memory device
- Easy to operate software with automatic processing function
- Supports low voltage components
- System Requirements: Windows (9X/ME/2000/NT/XP. Pentium II, min. 32 MB RAM but 64 MB recommended, 30MB free drive hard drive space.
- **Optional Accessories:**
  IC Adaptors: SOP, TSOP, SSOP, VSOP, SDIP, PLCC, QFP, BGA.

Approximately 2 weeks delivery on adapters

Part No. 01LP48 • Price: $650.00

BK PRECISION PROGRAMMER

USB INTERFACE – *MODEL 844USB*

Great common device programmer.
Reads, copies and programs IC's via USB computer interface

- 40 pin dual-in-line zif socket accepts both 300 and 600 mil devices up to 40 pins.
- In circuit serial programming (ISP) capability.
- Easy-to-Use. Windows 95/98/ME/NT/2000/XP compatible.

Part No. 01BK844USB • Price: $539.00

velleman PIC PROGRAMMER BOARD KIT

This board can program a wide range of Microchip® PIC™ microcontrollers
Suitable for the programming of the "VM142" mini PLC microcontroller

- Onboard configurable 40 pin. ZIF socket
- Microcontroller selection using patch jumper
- Easy to use programming PICprog2006™ software included
- SUBD connector set included

- Minimum system requirements:
- IBM Compatible PC, Pentium or better
- Windows™ NT/2000/XP
- CDROM drive
- Free serial RS232 port required

SPECIFICATIONS

- Power supply *(required)*: 15V DC, min. 300mA adapter
- Serial port connector: 9 p. SUBD
- Dimensions: 132x65x20mm / 5,23 x 2,57 x 0,79"
- Currently supported controllers:
  - — PIC10F200
  - — PIC12C508A,PIC12CE518
  - — PIC12F629,PIC12F675
  - — PIC16F54
  - — PIC16F84A
  - — PIC16F870,PIC16F871,PIC16F872,PIC16F873,PIC16F874
  - — PIC16F876,PIC16F877
  - — PIC16F627,PIC16F627A,PIC16F628,PIC16F628A
  - — PIC16F648A PIC16F630,PIC16F676
  - — PIC18F2550,...

Part No. 32VK8076 • Price: $41.95

PROGRAMMER UNIVERSAL USB

It allows programming, blank check, erase, comparison, encryption, functions as one key programming.

- 40 pin locking socket
- Powered by USB 2.0
- Pin contacting detection
- Size: 145 x 100 x 24 mm; wt: 1.2 lbs

Part No. 01PUUVS4500• Price: $75.90

PROGRAMMER UNIVERSAL

- Low cost USB 2.0 with Windows support and low voltage capability
- Extremely portable
- Supports devices that include EPROMs, Flash, PIC, AVR GAL, CPLD, PEEL, PALCE, EPLD, Microcontrollers
- 48 pin zif socket with universal pin driver
- Accepts most compiler outputs in JDEC format including ABEL, CUPL, PALASM, TANGO PLD, OrCADPLD, PLD Designer and ISDATA
- Features test vector capability and multiarray fuse map editor
- Test TTL/CMOS logic IC's and DRAM devices
- Supports Windows Vista/XP/2000/NT/9X/ME
- Support Devices: 25,000+ ***(Model VP590)***; 7,000+ ***(Model VP280)***; 6,000+ ***(Model VP290)***
- Power adapter *(optional)*
- Dimensions: 166 x 98 x 23mm; Wt. 10 oz.

Part No.	Description	Price
01VP290	Model VP290	$195.00
01VP280	Model VP280	235.00
01VP590	Model VP590	445.00
16DVP	DC Voltage Adapter	15.00

BK PRECISION UNIVERSAL PROGRAMMER

MODEL 866C

Model 866C

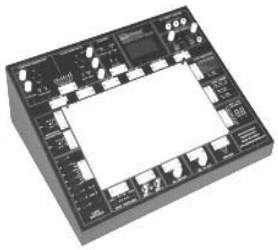
- USB interface
- Includes ZIF socket for DIP IC's. 48 pin ZIF
- Optional adapters available for PLCC, SOIC, TSOP, TQFP, SSOP, PSOP, QFP
- EPROM, EEPROM, Flash, NVRAM and serial EEPROM capability
- Connector for in-circuit programming

Part No.	Price
01BK866C	$1,095.00

Global® Specialties

ADVANCED ANALOG & DIGITAL DESIGN WORKSTATION

MODEL: PB507



The PB-507 Advanced Analog & Digital Electronic Design Workstation, is a powerful, versatile tool for circuit designers, engineers, technicians, students and hobbyists. All digital controls, USB port, and a wide choice of built-in circuits accessories allow rapid and accurate construction of virtually any type of analog or digital circuit. The PB-507 has an LCD that displays the settings for the active module selected. Simply touch a control element and the LCD switches to that module and displays its settings. Use the USB connection on the PB-507 and you can control or view the module's values from a PC. Using this feature you can project the controls to a large viewing screen for a classroom to observe and follow.

Features:

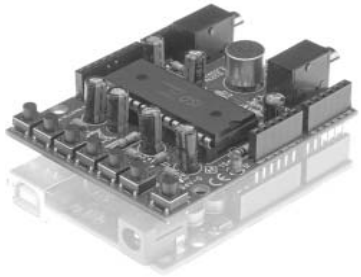
- USB connection enabling viewing and controlling from a PC
- Choose your power source: 6.3/12.6 V AC power, 5 V DC or variable +/-20 V DC
- Draw power from banana plug connections or the tie-point power supplies above each breadboard bus strip
- Powerful 1 MHz bandwidth Function Generator with sine, triangle, and square wave outputs
- Pulse Generator operates for a second, independent Function Generator but that you can modify the duty cycle between 10 to 90%
- Frequency Counter module reports on the output of your own specially designed circuits
- Flush mounted, removable circuit breadboard with over 4,100 contact points

Part No. 01PB507 • Price $960.00

velleman

RGB SHIELD FOR ARDUINO

MODEL: KA01



Control 3 dimmer channels (1 x RGB or 3 single channels) with Arduino UNO™
Also available as completely mounted module VMA01

Features

- downloadable example sketch
- stackable design: the shield can be stacked with other shields
- large user community
- requires 1 Arduino UNO™ (not included)

Specifications

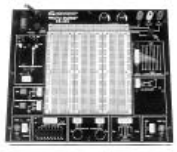
- 2 A load via Vin or 6 A load via external power
- 12 or 24 V external power supply
- uses pin 3, 5, 6 PWM on an Arduino UNO™ board
- dimensions: 68 x 53mm / 2.67 x 2.08"

Part No. 01VKKA01 • Price $18.95

Global® Specialties

PROTO-BOARD® DESIGN WORKSTATION SERIES

MODEL PB503 – Bench-Top Workstation
MODEL PB503C – Portable Unit (Includes Rugged Carrying Case, Meter sold separately)
MODEL PB505 – Advanced Design; Enhanced Features



PB-503

PB-503C

PB-505

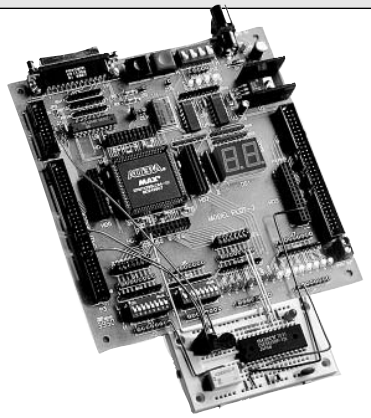
- Multiple test equipment features in one complete instrument.
- 100KHz function generator with sine, square, triangle and TTL.
- Triple output power supply offers 5VDC fixed plus two variable outputs: 1.3 to 15VDC.
- Removable breadboard sections.
- 8 channel logic monitor.
- 8 selectable logic switches.
- Two digital pulsers, audio experimentation speaker.
- High and low buffered logic indicators.
- **Additional Features (*Model PB505)*** – Larger breadboard area, low voltage (12.5VAC), AC supply, built in logic probe, BCD to 7 segment decoder/ display, compatible with optional trainer boards.
- **Courseware for Global PB-503 and PB-505 Trainers**
  Electronic Fundamentals - Student Textbook, Instructor Guide, Breadboard Lab Manual & Instructor Solution Guide with comprehensive coverage basic theories in AC/DC, circuit design, components, schematic symbol guide, formulas, technical glossary
  Digital Electronics Courseware - Student Textbook and Instructor Guide covering sourse in Digital logic in several numbering systems, Boolean algebra, Flip-Flop circuitry, Counters and registers building up to Microcomputing

Part No.	Description	Price
01PB503	Design Workstation – Bench Style	$369.00
01PB503C	Design Workstation – With Case	430.00
	*Meter sold separately	
01PB505	Advanced Circuit Design Trainer	540.00
01GSC2301	Student Text – Electronic Fundamentals	46.95
01GSC2302	Instructor Guide - Electronic Fundamentals	32.95
01GSC2311	Breadboard Lab Manual - Electronic Fundamentals	46.95
01GSC2312	Instructor Solution Guide - Electronic Fundamentals	20.00
01GSC3200	Student Text – Digital Electronics	49.95
01GSC3201	Instructor Guide – Digital Electronics	49.95

RSR PLDT-2 PROGRAMMABLE LOGIC DEVICE PROTOTYPING BOARDS

WHY USE OLD, OBSOLETE TTL GATES TO IMPLEMENT COMPLEX LOGIC & STATE MACHINE DESIGNS?

with the ALTERA® EPM7128SLC™ CPLD



ONLY $79.00

Power Supply and Cable Included

Breadboard Optional

User design software available from the chip manufacturer.* Then download your design from the PC with the parallel port cable (included). each comes with a user's manual containing a complete description of the board together with Lab experiments, power supply and cable.

* *Design software is available at the following chip manufacturer websites: For the **Altera** chip: http://www.altera.com. You can also go to the PLDT page on the Electronix Express website at http://www.elexp.com/tst_pldt.htm which has links directly to the software pages.*

HAS THE ON-BOARD I/O CAPABILITY YOU NEED:

- DIP Switches
- De-bounced Momentary Switches
- LEDs
- 7-Segment Displays
- Numerous Connectors for Jumper-Wires and Ribbon Cables

ACCESSORY KIT *(32RSRFPGAACC)*

INCLUDES: 1 RSR MB-102 Breadboard with Wire Kit
1 RSR LP-610 Logic Probe
50 Breadboarding Pins

Part No.	Description	Price
01PLDT2	PLDT-2 Board	$79.00
31CPLD	CPLD Programming Lab Manual	89.95
31P0130453056	Experiments In Digital Fundamentals With VHDL	91.50
311401840302	Digital Design With CPLD Applications & VHDL, 2Ed.	190.95
32RSRFPGAACC	Accessory Kit	19.95

CPLD PROGRAMMING & DIGITAL LOGIC SIMULATION – *By Steve Waterman*

A lab manual to accompany any digital electronics textbook. This lab manual can help you learn how to use Max+plusII software by Altera Corporation. This manual starts with fundamentals of logic gates, then progresses to MSI devices, latches and flip flops. Then it moves on to clock dependent circuits including counters and registers, memory addressing, and converters.

EXPERIMENTS IN DIGITAL FUNDAMENTALS WITH VHDL

Provides laboratory exercises that support Digital Fundamentals with VHDL by Tom Floyd. The manual supports the PLDT-2 and PLDT-3 boards from RSR Electronics, as well as the DeVry University board, and the Altera University Program board.

DIGITAL DESIGN WITH CPLD APPLICATIONS & VHDL, 2ED

2nd edition; 896 pages. Updated Altera's Quartus II software and Lab.Source CD included with book. Thorough coverage of basic techniques and fundamentals to advanced principles.

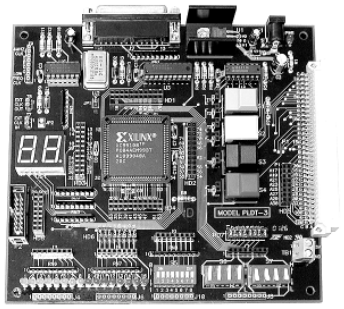
RSR PLDT-3 PROGRAMMABLE LOGIC DEVICE PROTOTYPING BOARDS

WHY USE OLD, OBSOLETE TTL GATES TO IMPLEMENT COMPLEX LOGIC & STATE MACHINE DESIGNS?

with the XILINX® XC95108™ CPLD

ONLY $79.00

Power Supply and Cable Included



User design software available from the chip manufacturer.* Then down-load your design from the PC with the parallel port cable (included). EACH comes with a user's manual containing a complete description of the board together with Lab experiments, power supply and cable.

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- DIP Switches
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- LEDs
- 7-Segment Displays
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* *Design software is available at the following chip manufacturer website: For the Xilinx chip: http://www.xilinx.com*
You can also go to the PLDT page on the Electronix Express website at http;//www.elexp.com/tst_pldt3.htm which has links directly to the software pages.

ACCESSORY KIT *(32RSRFPGAACC)*

INCLUDES: 1 RSR MB-102 Breadboard with Wire Kit
1 RSR LP-610 Logic Probe
50 Breadboarding Pins

DIGITAL ELECTRONICS LABORATORY EXPERIMENTS

USING THE XILINX® XC95108™ CPLD WITH XILINX® FOUNDATION DESIGN AND SIMULATION SOFTWARE

This digital laboratory manual by James Stewart and Chao-Ying Wang, published by Prentice Hall, allows introductory digital electronics students to use the Xilinx® software early in the course. Features of this manual include:

- A step-by-step introduction to Xilinx® software.
- Class-tested laboratory experiments guaranteed to work.
- More than one experiment for most typical areas to allow for greater flexibility in the laboratory environment.

Part No.	Description	Price
01PLDT3	PLDT-3 Board	$79.00
31DELE	Digital Electronics Laboratory Experiments	90.20
32RSRFPGAACC	Accessory Kit	19.95

terasIC FPGA ALTERA BOARD WITH USB

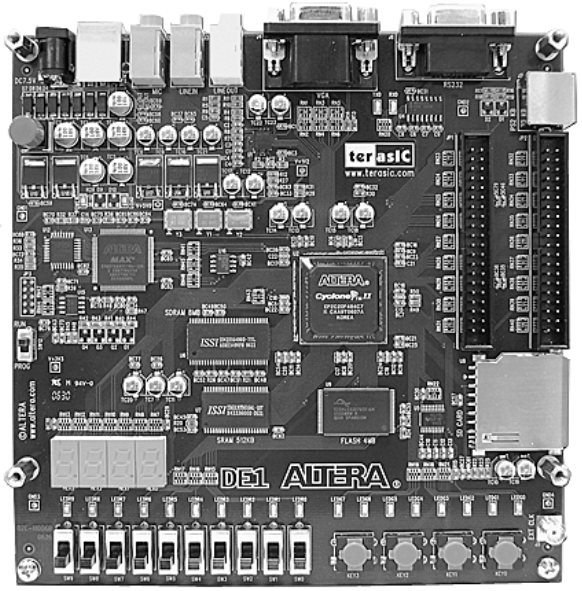
Provides ideal vehicle for advanced design prototyping in the multimedia, storage, and networking. The board offers a rich set of features that make it suitable for use in a laboratory environment for university and college courses, for a variety of design projects, as well as for the development of sophisticated digital systems. Altera provides a suite of supporting materials for the DE1 board, including tutorials, "ready-to-teach" laboratory exercises, and illustrative demonstrations.

Altera DE1: Available on the Altera website (http://university.altera.com/materials/unv-dev-edu-boards.html)t

FEATURES

DE1 board provides users many features to enable various multimedia project development. Component selection was made according to the most popular design in volume production multimedia products. The DE1 platform allows users to quickly understand all the insight tricks to design projects for industry.

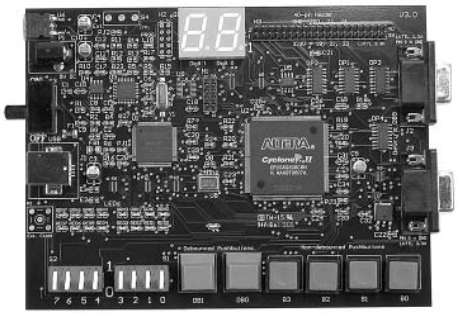
- Altera Cyclone II 2C20 FPGA with 20000 LEs
- Altera Serial Configuration deivices (EPCS4) for Cyclone II 2C20
- USB Blaster built in on board for programming and user API controlling
- JTAG Mode and AS Mode are supported
- 8Mbyte (1M x 4 x 16) SDRAM
- 4Mbyte Flash Memory
- 512Kbyte(256Kx16) SRAM
- SD Card Socket
- 4 Push-button switches
- 10 DPDT switches
- 8 Green User LEDs
- 10 Red User LEDs
- 4 Seven-segment LED displays
- 50MHz oscillator ,24MHz oscillator ,27MHz oscillator and external clock sources
- 24-bit CD-Quality Audio CODEC with line-in, line-out, and microphone-in jacks
- VGA DAC (4-bit R-2R per channel) with VGA out connector
- RS-232 Transceiver and 9-pin connector
- PS/2 mouse/keyboard connector
- Two 40-pin Expansion Headers
- DE1 Lab CD-ROM which contains many examples with source code



Part No. 01FPGA2 • Price: $150.00

FPGA BOARD WITH USB PORT

- Provides means of learning and prototyping digital logic, computer systems and FPGA code. This board provides a complete low cost platform using Altera Cyclone II (EP2C8) chip connected to various LEDs, switches and 7-segment displays. One can use web edition of Altera Quartus II to design FPGA code using Verilog HDL, VHDL as well as other design methods
- USB port for transferring FPGA to chip configurations
- 8 red LEDs, 8 green LEDs
- 2 sets of 4 SPDT switches
- 2 debounced, 4 non-debounced switches
- 40 pin and 2 DB-9 I/O connectors for interfacing
- 24MHz clock; can be multiplied or divided using interal PLL



Part No. 01FPGA4 • Price: $149.00

Global Specialties MICROPROCESSOR TRAINER *Model DL-030*

A highly rated 137 page Lab Manual written by a major U.S. university Professor is included with this trainer. Altera Cyclone ® II ® FPGA based, this unit is capable if integrating seamlessly into both Quartus ® II FPGA design framework and NOIS ® II GNU based development environment. While is is advanced enough to design and prototype complex embedded systems, students are able to create and implement designs in a little as one hour.

- Sleek design with durable portability
- Well written 137 page Student Trainer Lab manual with experiments
- Altera Cyclone ® III, EP3C16F256C8N FPGA
- USB interface cable, Software CD, sturdy jumpers for breadboards
- 270 tie point breadboard, 3 pushbutton switches
- LED's, 3 seven-segment displays requires Widows XP or higher, 10 Gb for installation and 4 Gb to run post installation

Part No.	Description	Price
01MPTDL030	Microprocessor Trainer	$699.00

matrixmultimedia ELECTRONIC PROJECTS

PLATFORM: WINDOWS 3.1/95/98/NT; FORMAT: CD ROM

- 10 projects to build
- Component lists – also included as separate files for easy access
- Fully functional schematic design and PCB layout software included on the CD (CAD Pack)
- Component and general construction guides
- Project specific construction and testing

The projects on this CD are as follows:

- Light, Heat and Moisture Sensor
- Logic Probe
- NE555 Timer
- Egg Timer
- Dice Machine
- Bike Alarm
- Stereo Mixer
- Power Amplifier
- Sound Activated Switch
- Reaction Tester

Part No.	Description	Price
01ELEPSST	Electronic Projects – Student Ver.	$59.00
01ELEPSSI	Electronic Projects – Single User	93.00
01ELEPS10	Electronic Projects – 10 User	192.00

matrixmultimedia ELECTRONIC CIRCUITS AND COMPONENTS – VER. 2

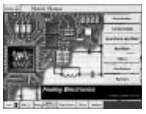
PLATFORM: WINDOWS 95/98/NT/2000/ME; FORMAT: CD ROM

- Highly interactive virtual labs. Clear circuit simulation.
- Spoken text caters to students with low reading ability.
- Thorough assessment – multiple choice, worksheets, fault finding circuits, written exam questions and assignments.
- Flexible resources – stand alone, in front of class, class activity on a network, revision/remediation.
- Browser based – Intranet ready.
- Teachers' notes and editable worksheets included on CD.
- Multi Sim® / Electronics Workbench® circuits provided.

Part No.	Description	Price
01ELECCSI2	Electronic Circ. & Comp – Single User	93.00
01ELECC102	Electronic Circ. & Comp – 10 User Ver.	192.00

matrixmultimedia ANALOG ELECTRONICS

PLATFORM: WINDOWS 3.1/95/98/NT; FORMAT: CD ROM

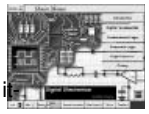


- Virtual labs
- SPICE® simulation of over 50 editable circuits
- Design parameters for circuits included
- Complete hi-fi amplifier case study
- Editable worksheets

Part No.	Description	Price
01ELANAST2	Analog Electronics – Student Ver.	$59.00
01ELANASIN2	Analog Electronics – Single User	93.00
01ELANA102	Analog Electronics – 10 User Ver.	192.00

matrixmultimedia DIGITAL ELECTRONICS

PLATFORM: WINDOWS 3.1/95/98/NT; FORMAT: CD ROM



- Virtual labs
- Full audio commentary
- Over 20 links to pre-designed Electronics Workbench® circuits and crocodile clips
- Teachers' notes
- Editable worksheets

Digital Electronics provides a broad introduction to the principles and practice of digital electronics, including logic gates, combinational and sequential logic circuits, clocks, counters, shift registers, and displays. The CD ROM also provides an introduction to microprocessor based systems.

Part No.	Description	Price
01ELDIGST2	Digital Electronics – Student User	$59.00
01ELDIGSI2	Digital Electronics – Single User	93.00
01ELDIG102	Digital Electronics – 10 User License	192.00

Global Specialties PROTOLAB™ CIRCUIT SIMULATION SOFTWARE

CREATE AND ANALYZE CIRCUITS INSTANTLY ON YOUR PC!

Release 4.0

Protolab™, a total computer-simulated, electronics laboratory including free built-in test instruments and tools to build and test actual circuits.

- Easy-to-use interface: Create AC&DC circuits moments after installation with ProtoLab's easy "click & drag" component placement and on-line help
- Choose from a complete list of active and passive components
- Five virtual instruments allow for instant, accurate circuit analysis: Voltmeter, Ammeter, Wattmeter, Oscilloscope, Ohmmeter
- Pre-designed circuit library included

SYSTEM REQUIREMENTS:

- IBM/PC 386 or compatible with 4MB RAM
- SVGA video
- Windows 3.1 or Windows 95
- Mouse
- 3½ floppy drive

Part No. 01PL300-0007 • Price: $49.95

RSR PIC WRITER – HANDHELD

SERIAL PROGRAMMER COMPATIBLE WITH MICROCHIP® MPLAB DEVELOPMENT SOFTWARE

Low cost programmer supports many devices from PIC family. Operates with PC-compatible host system running Windows 3.X/ ME/NT/2000/XP. Reads, programs, verifies EPROM and EEPROM program and data memory. MPLAB Project support to automatically download object file to PSTART. Complete with RS-232 cable, 9V universal power adapter. Includes MPLAB Development Software (CDROM).

LP-PICD is manufactured under license from **MICROCHIP®**

Part No. 01LPPSTART • Price $205.00

matrixmultimedia ASSEMBLY FOR PICmicro® MICROCONTROLLERS CD ROM

- Virtual PIC allows full on-screen simulation programs
- Over 80 exercises
- Over 30 full working programs
- On-screen challenges
- Includes shareware assembler and send programs

The PICtutor is designed to teach users of all levels how to write assembler programs for the PIC series of microcontrollers. The CD ROM's 39 tutorial sections guide the complete beginner through PIC architecture, commands and programming techniques up to advanced programming techniques including discussion and examples of watchdog timers, interrupts and sleep modes. Over 80 exercises and challenges are provided.

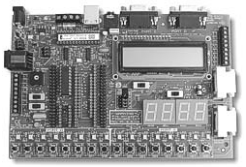
Part No.	Description	Price
01PICST2	Assembly for PICmicro / Student Ver.	$59.00
01PICSI2	Assembly for PICmicro / Single User	125.00
01PIC102	Assembly for PICmicro / 10 User	375.00

matrixmultimedia E-BLOCK™ SYSTEM

The E-Block™ System consists of small circuit boards each of which contains electronics that you would typically find in an Electronic System. The E-Blocks™ range consists of around 150 separate items which can be combined to make a variety of systems offering a wide range of learning opportunities. ***Select a Programmer Board, add a number of peripheral boards, combine with a range of software utilities including "Flow Code" to develop a fully functional electronic system***.

PROGRAMMING BOARDS

PICMICRO DEVELOPMENT BOARD VER. 3

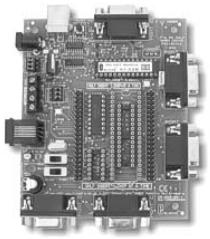


This is an ideal platform for learning how PICmicros are programmed and also for project work. This board programs a range of 8, 14, 18, 28 and 40 pin devices from the 12, 16 and 18 series PIC micro ranges. The on-board LED's, switches and displays can be used in CD ROM based courses or with Microchip's MPLAB software. The board also has two E-Blocks parts (on ports C and D) which makes it compatible with a large range of E-blocks add-ons and sensors.

Features:
- USB Connector
- Single bit audio output
- 2 line LCD display
- Onboard sensors
- Quad 7 segment displays

Part No. 01HP488 • Price: $285.00

PICMICRO MULTIPROGRAMMER



This programmer connects to your PC via USB to provide you with a low cost and flexible PIC microcontroller programmer. This board can be used with Assembly, C or Flowcode programming utilities provided by Matrix Multimedia. This board will programm most 8, 14, 18, 28 and 40 pin flash PIC micro devices using the flexible programming software provided and provided "clean" access to all I/O lines. The board has 5 E-blocks parts to which you can connect a variety of peripheral boards.

Part No. 01EB006 • Price: $115.00

matrixmultimedia

FLOWCODE / PICMICRO

PLATFORM WIN95/98/ME/NT/2000/XP

Flowcode is a very high level language programming system for PICmicro® microcontrollers **based on flowcharts.** Flowcode allows students to design complex robotics and control systems in a matter of minutes. Flowcode is a powerful language that uses macros to facilitate the control of complex devices like 7-segment displays, motor controllers, and LCD displays. The use of macros allows students to control highly complex electronic devices without getting bogged down in understanding the programming involved.

Part No.	Description	Price
01TEFLCST2	Flowcode Student Ver.	$74.00
01TEFLCSI2	Flowcode Single User	235.00
01TEFLC102	Flowcode 10 Users	695.00

PERIPHERAL BOARDS

LED BOARD

It has 8 LEDs which shows the status of each bit on the port

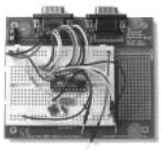
LCD BOARD

This E-block contains a 16 character 2 line alphanumeric LCD display on a 5 wire serial bus.

SWITCH BOARD

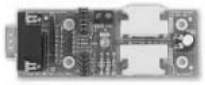
This E-block contains 8 push-to-make switches. Connectors allow this board to be used in bus configuration.

PROTOTYPE BOARD



It contains a small breadboard for developing circuits and projects. Connectors for two E-block ports allow prototype wires and leads to be connected to the rows and columns on the prototype board.

SENSOR BOARD



This board contains a variable resistor and a simple light sensor which can be used for simple analog experiments. It also contains sockets which allow users to interface with many other sensors.

BLUETOOTH BOARD

This board allows you to add Bluetooth capability to any microcontroller with UART functionality.

INTERNET BOARD

This board adds Ethernet functionality to a microprocessor with the need for developing a TCP-IP software stack.

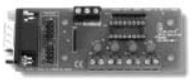
VOICE CODEC BOARD

This audio coder-decoder board allows students to investigate Bluetooth systems that use audio. It is based on MC145483 linear 13 bit CODEC which allows voice digitization and reconstruction as well as pre and post filtering.

MOTORS BOARD

This board is based on L298 device which can drive two motors operating up to 46 V @ 4A each. It can be used in a variety of motor control configurations including PID control.

OPTO-ISOLATOR BOARD



This Opto-Isolator Board allows you to add 4 separate optically isolated inputs to your E-blocks system. This is ideal for developing industrial control systems like PLCs (programmable Logic Controllers) where electrical systems need to be isolated from one another.

KEYPAD BOARD

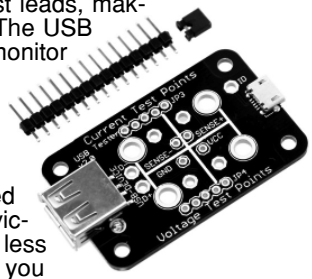
A simple 4 x 3 keyboard that allows data entry into bus based systems.

Part No.	Description	Price
01EB004	LED Board	$22.00
01EB005	LCD Board	32.00
01EB007	Switch Board	22.00
01EB016	Prototype Board	32.00
01EB003	Sensor Board	33.90
01EB024	Bluetooth Board	210.00

Part No.	Description	Price
01EB023	Internet Board	$120.00
01EB032	Voice CODEC Board	210.00
01EB022	Motor Board	95.00
01EB035	Opto-Isolator Board	54.00
01EB014	Keypad Board	26.00

USB TESTER

USB has become the core of many projects. In my experience I've found it to be troublesome to test USB voltage levels and current usage using a breadboard. They usually consist of holding wires attached to the DMM's test leads, making it difficult to get solid readings. The USB Tester will make it much easier to monitor any USB project's power source.

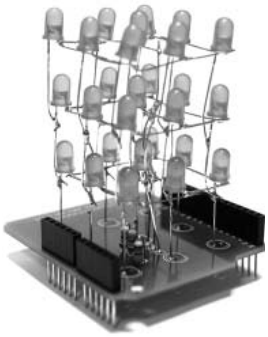


As part of the USB spec, you are limited to 500ma, so you want to monitor how close you are. Most people use USB hubs, both powered and unpowered, and with many devices connected, you can end up with less than 5V which can cause havoc on you projects. The USB Tester will make it a snap to monitor voltage levels and current usage without having to re-wire your breadboard. Just connect to your oscilloscope or DMM test leads, and you're good to go! The USB D+/D- pins are also broken out so you can monitor those on an oscilloscope, or for USB sniffing.

Part No. 01ADA1456 • Price: $15.95

3X3X3 LED CUBE

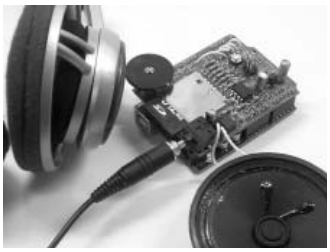
ARDUINO SHIELD



The 3x3x3 LED Cube Arduino Shield was designed and built by young maker, Joey Hudy. This LED Cube is sure to impress. The cube's 3D construction is straightforward and easy to solder using the included jig and instructions. Sample code is available and can easily be modified to make your own basic animations and displays. It's available in both red and green so you can pick your favorite color and have it up and flashing in no time!

Part No. 32SS821003001 • Price: $19.95

adafruit WAVE SHIELD FOR ARDUINO



Adding quality audio to an electronic project is surprisingly difficult. Here is a shield for Arduinos that solves this problem. It can play up to 22KHz, 12bit uncompressed audio files of any length. It's low cost, available as an easy-to-make kit. It has an onboard DAC, filter and op-amp for high quality output. Audio files are read off of an SD/MMC card, which are available at nearly any store. Volume can be controlled with the onboard thumbwheel potentiometer.
This shield is a kit, and comes with all parts you need to build it.
Arduino, SD card, tools, speaker and headphones are not included.

Part No. 01ADAPWSK • Price $22.00

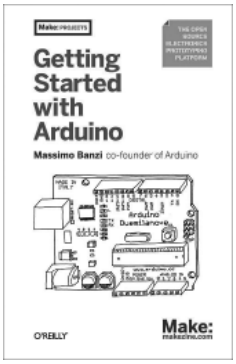
BASIC KIT FOR ARDUINO

The Arduino Sidekick Basic Kit is designed to be used with your Arduino / Seeeduino / Seeeduino ADK / Maple Lilypad or any MCU board. It contains everything needed for a first-time user to connect his/her computer to an Arduino.

It includes many of the most popular accessories for DIY projects : like Breadboard, Jumper wires, Color LEDs, Resistors, Buzzer, etc. All of these coming with its own handy box are easy transport and minimal clutter.

Part No. 32SS815011001 • Price: $19.90

Arduino GETTING STARTED WITH ARDUINO



This valuable little book offers a thorough introduction to the open-source electronics prototyping platform that's taking the design and hobbyist world by storm. *Getting Started with Arduino* gives you lots of ideas for projects and helps you get going on them right away. To use the introductory examples in this book, all you need is a USB Arduino, USB A-B cable, and an LED. This 128-page book is a greatly expanded follow-up to the author's original short PDF that's available on the Arduino website.

Part No. 31ADRGS • Price: $14.95

Arduino MAKING THINGS TALK

Through a series of simple projects, this book teaches you how to get your creations to communicate with one another by forming networks of smart devices that carry on conversations with you and your environment. Whether you need to plug some sensors in your home to the Internet or create a device that can interact wirelessly with other creations, *Making Things Talk* explains exactly what you need.

Part No. 31ADRMTK • Price: $29.95

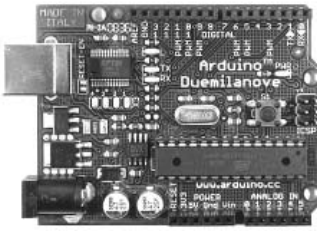
THE ARDUINO STARTER KIT

This kit walks you through the basics of using the Arduino in a hands-on way. You'll learn through building several creative projects. The kit includes a selection of the most common and useful electronic components with a book of 15 projects. Starting the basics of electronics, to more complex projects, the kit will help you control the physical world with sensor and actuators.

The projects in this kit are:
- **GET TO KNOW YOUR TOOLS** an introduction to the concepts you'll need to use this kit
- **SPACESHIP INTERFACE** design to control panel for your startship
- **LOVE-O-METER** measure how hot-blooded you are
- **COLOR MIXING LAMP** produce any color with a lamp that uses light as an input
- **MOOD CUE** clue people in to how you're doing
- **LIGHT THEREMIN** create a musical instrument you play by waving your hands
- **KEYBOARD INSTRUMENT** play music and make some noise with this keyboard
- **DIGITAL HOURGLASS** a light-up hourglass that can stop you from working too much
- **MOTORIZED PINWHEEL** a color wheel that will have your head spinning
- **ZOETROPE** create a mechanical animation you can play forward or reverse
- **CRYSTAL BALL** a mystical tour to answer all your tough question
- **KNOCK LOCK** tap out the secret code to open the door
- **TOUCHY-FEEL LAMP** a lamp that responds to your touch
- **TWEAK THE ARDUINO LOGO** control your personal computer from your Arduino
- **HACKING BUTTONS** create a master control for all your devices!

Part No. 01ARD000007 • Price $125.00

Arduino DUEMILANOVE
AT MEGA 328 I/O BOARD



Arduino is an open-source physical computing platform based on a simple i/o board and a user friendly development environment that implements the Processing/Wiring language.
Arduino can be used to develop stand-alone interactive objects or can be connected to software on your computer (e.g. Flash, Processing, MaxMSP,PD).
Duemilanove is the enhanced release of Diecimila version. It adds to the previous new features (autoreset function, extended power connector, built in led, USB overcurrent protection) the automatic power selection. Board comes fully assembled and tested with the new processor ATMega328 pre-loaded with bootloader.

Board has 14 digital input/output pins, 6 analog inputs, 16MHz crystal oscillator, a USB connection, a power jack. Wt. 2oz.

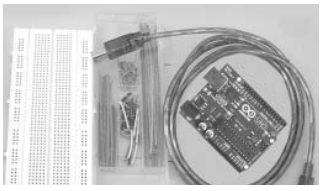
Part No. 01ARDAM328 • Price $37.50

Arduino UNO
AT MEGA 328 I/O BOARD

The Arduino Uno is a microcontroller board based on the ATmega328. It has 14 digital input/output pins (of which 6 can be used as PWM outputs), 6 analog inputs, a 16 MHz crystal oscillator, a USB connection, a power jack, an ICSP header, and a reset button. It contains everything needed to support the microcontroller; simply connect it to a computer with a USB cable or power it with a AC-to-DC adapter or battery to get started.
The Uno differs from all preceding boards in that it does not use the FTDI USB-to-serial driver chip. Instead, it features the Atmega8U2 programmed as a USB-to-serial converter

Part # 01ARDUNO • Price: $29.95

RSR UNO BASIC PACK



Ideal kit for Arduino projects for schools and hobbiests.
Includes: Arduino UNO Board, breadboard, jumper wire set, USB A-B cable, and battery adapter. Battery not included.

Part No. 32ARDBPK1 • Price $37.95

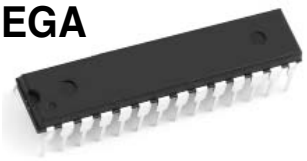
RSR STARTING WITH ARDUINO UNO KIT

Arduino UNO is a micro-processor based board that can sense and control physical objects. It is an open source computing platform. This kit includes the classic book "Getting started with Arduino" by Massimo Banzi (Co-founder of Arduino), Arduino UNO Board, and many electronic components required to perform experiments in his book

- UNO Module
- Book
- USB Cable
- (10) 10K Ohm resistors
- (10) 220 Ohm resistors
- 2 Tactile Mom. Switches
- 2 Photoresistors
- 2 Red LEDs
- 2 green LEDs
- 2 blue LEDs
- 1 RGB LED
- Jumper Wire Kit
- 1 Breadboard (Clear)
- IRF 520 MOSFET
- Battery Adapter
- DC Motor

Part No. 32ARDSAUK • Price $66.95

Arduino IC ATMEGA 328P MPO



Pre-loaded with Arduino UNO Bootloader

Part No. 01ARDA000048 • Price $5.49

RELAY MODULE
ARDUINO COMPATIBLE

The DFRobot single relay allows you to switch on and off a number of electronic modules. It can be used in interactive projects or to control lighting, electrical and other equipment. The modular design makes it easy to expand with the Arduino board (not included). The relay output state is indicated by an LED. It can be controlled through the digital I/O port to trigger a solenoid valve, lamp, motor or other high current or high voltage devices.

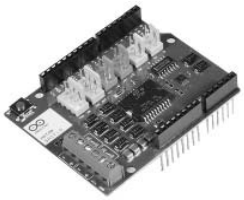
Part No. 01DFR0017 • Price $9.90

GRAPHIC LCD SHIELD
FOR ARDUINO

This LCD4884 Shield provides a 48x48 display. It is able to display English, Chinese, and even images. The shield has 6 Digital IO and 5 Analog IO.

Part No. 01DFR0092 • Price $26.90

Arduino SHIELD-MOTOR KIT



The Arduino Motor Shield is based on the L298, which is a dual full-bridge driver designed to drive inductive loads such as relays, solenoids, DC and stepping motors. It lets you drive two DC motors with your Arduino board, controlling the speed and direction of each one independently.

Part No. 01ARDSMKIT • Price: $39.95

PROTOTYPING SHIELD FOR ARDUINO

This is a design for an open-source prototyping shield for Arduino NG/Diecimila. It has tons of cool features, to make prototyping on your Arduino easy.
It is shipped fully assembled.

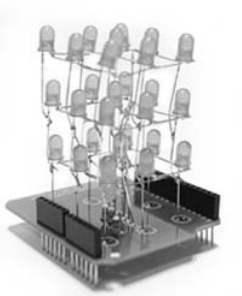
Part No. 01DFR0019 • Price 12.90

adafruit 2.8" TFT TOUCH SHIELD

Spice up your Arduino project with a beautiful large touchscreen display shield with built in microSD card connection. This TFT display is big (2.8" diagonal) bright (4 white-LED backlight) and colorful (18-bit 262,000 different shades)! 240x320 pixels with individual pixel control. It has way more resolution than a black and white 128x64 display. As a bonus, this display has a resistive touchscreen attached to it already, so you can detect finger presses anywhere on the screen.
The shield is fully assembled, tested and ready to go. No wiring, no soldering! Simply plug it in and load up our library - you'll have it running in under 10 minutes! Works best with any classic Arduino (UNO/ Duemilanove/Diecimila).

Part No. 01ADFTSH • Price $39.90

3X3X3 LED CUBE ARDUINO SHIELD



What has 27 LEDs, is 3 dimensional, and is Arduino controlled? It's the 3x3x3 LED Cube Arduino Shield! Designed and built by a young maker, this LED Cube is sure to impress.
The cube's 3D construction is straightforward and easy to solder using the included jig and instructions. Sample code is available and can easily be modified to make your own basic animations and displays. It's available in both red and green so you can pick your favorite color and have it up and flashing in no time!
Arduino not included

Part No.	Description	Price
32MKLEDCUBE-RD	Red LEDs	$15.00
32MKLEDCUBE-GN	Green LEDs	15.00

LCD SHIELD
FOR ARDUINO

This is a very popular LCD keypad shield for Arduino or Freeduino boards. It can be directly plugged onto the Arduino board, no soldering or fly-wiring needed.

FEATURES:
- 16 character x 2 line HD44780 compatible LCD
- Uses Arduino LCD4Bit library
- White character & Blue backlight
- No soldering necessary

Part No. 01DFR0009 • Price $19.75

IR KIT FOR ARDUINO

Provides remote control capability to your project

Part No. 01DFR0107 • Price $9.90

RASPBERRY PI WIRELESS INVENTORS KIT

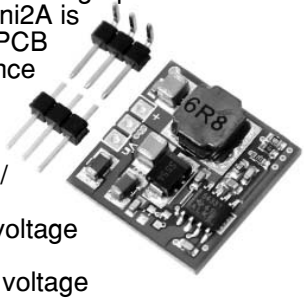
The Wireless Inventors Kit for the Raspberry Pi (RasWIK) is an exciting and affordable addition to the Raspberry Pi. RasWIK demonstrates that with our leading edge technology anyone (and we mean anyone) can build wireless sensors and actuators, you do not need huge experience, a degree or even any tools. We show you even how to connect the devices you build to "the Internet of Things" (IoT) service providers such as Xively.

There are 29 fully documented projects. The 17 hardware projects take you from very basic sensors, actuators and light controls to more complicated ones that include measuring temperature and light levels. Out of the box all the hardware is configured to start you off without you writing a single line of code.

Part No. 01SS110110001 • Price: $96.90

MINI POWER MODULE FOR DIY PROJECTS

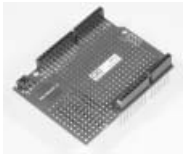
The PNMini2A power module is a high efficiency converter (up to 92%) capable of driving up to 2A load withoutusing!heat!sink.The PNMini2A is available in an innovative small PCB that enhances thermal performance and allows for hand soldering or plugin use.



- One module supports positive / negative output
- 3.5V to 28V for positive input voltage range
- 2.7V to 27V for negative input voltage range
- Supports up to 2A continuous output current (no heat sink required)

Part No. 01SEDPNMINI2A • Price: $15.00

Arduino PROTO SHIELD REV 3 (ASSEMBLED)

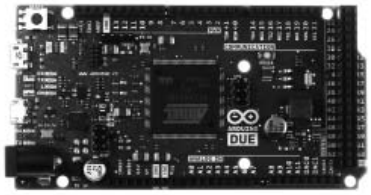


Makes it easy to design custom circuits. Solder parts to prototyping area.

Part No. 01ARD000077 • Price $15.95

ARDUINO DUE

MICROCONTROLLER



The Arduino Due is the newcomer microcontroller board in the Arduino boards family. It's the first board based on a 32 bit ARM core processor, the Atmel SAM3X8E ARM Cortex-M3 MCU, that improve all the standard Arduino functionalities and add more new features.

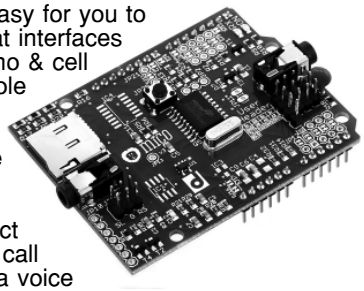
It offer 54 digital input/output pins (of which 12 can be used as PWM outputs, with selectable resolution), 12 analog inputs with 12 bit of resolution, 4 UARTs (hardware serial ports), and two DAC outputs (digital to analog converter), 84 MHz crystal oscillator, two USB connections, a power jack, an ICSP header, a JTAG header, and a reset button. The maximum voltage that the I/O pins can provide or tolerate is 3.3V. Providing higher voltages, like 5V to an input pin could damage the board.

The Due has two usb connectors, the one with the micro-usb AB connector is the native one capable to act as an USB host, that means you can connect compatible external usb peripherals to the board, such as mouse, keyboards, smartphones. While the other USB port with the type B connector is intended for debugging purposes.

Part No. 01ARD000062 • Price: $49.95

MICO SHIELD FOR ARDUINO

EASY INTERFACE WITH CELL PHONE



The MICO Shield makes it easy for you to create an Arduino project that interfaces with a cell phone. The Arduino & cell phone interface unlock a whole new world of possibilities: projects where your Arduino can place phone and receive phone calls.

An example of a MICO project is where it receives a phone call and presents the caller with a voice prompt: "press 1 for lights on". MICO can then decode the caller's button press and take action, in this case turn an output on. Of course everything is customizable: MICO has a microSD card slot so you can store your own voice and all MICO libraries and sketches are open source, free to download and hack.

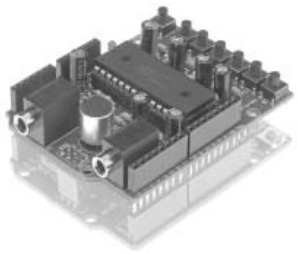
MICO interfaces to a cell phone's 3.5mm audio jack. MICO has no build-in cell module or antenna. Because of that, MICO provide some key advantages:

Universal: can work on ANY cell network over the world! GSM, CDMA, TDMA, analog…

Part No. 01SEDMICSLD • Price: $36.50

velleman

AUDIO SHIELD FOR ARDUINO



MODEL: KA02

Record your voice via a built-in microphone or a line input. Also available as completely mounted module VMA02

Features

- 60 second recording time
- start playback, record,... via on-board buttons or via Arduino® UNO
- playback via a speaker or a line output
- downloadable sample sketch and library
- stackable design: the shield can be stacked with other shields
- large user community
- requires 1 Arduino UNO™ (not included)

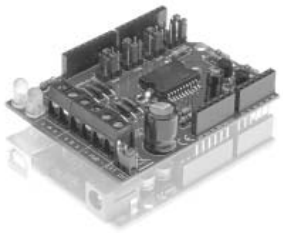
Specifications

- audio sample frequency: 8 kHz
- uses pin 10 on an Arduino UNO™ board as a Chip Select
- uses the ICSP pins on an Arduino as a serial connection to the shield to free up I/O pins
- memory write up to 100.000 X
- dimensions: 71 x 53mm / 2.79 x 2.08"

Part No. 01VKKA02 • Price $18.95

velleman

MOTOR AND POWER SHIELD FOR ARDUINO



MODEL: KA03

Power shield that can drive: relays, solenoids, DC and stepper motors.
Also available as completely mounted module VMA03.

Features

- 2 channels
- choose between an external or internal (Vin) power supply
- based on the dual full bridge driver L298P
- downloadable sample sketch
- stackable design: the shield can be stacked with other shields
- large user community
- requires 1 Arduino UNO™ (not included)

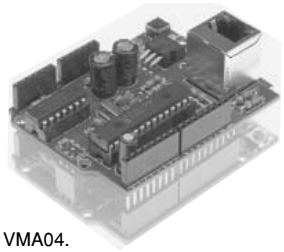
Specifications

- 2.5 A (max.) output current (each channel)
- 50 V (max.) external power supply input
- used pins on an Arduino UNO board can be
- selected to accommodate for other stacked shields
- dimensions: 68 x 53mm / 2.67 x 2.08"

Part No. 01VKKA03 • Price $18.95

velleman

ETHERNET SHIELD FOR ARDUINO



MODEL: KA04

Configure your Arduino as a simple web server or let it get data from the worldwide web.
Also available as completely mounted module VMA04.

Features

- Based on a Microchip ENC28J60 chip
- Downloadable sample sketches and library
- Stackable design: the shield can be stacked with other shields
- Large user community
- Requires 1 Arduino UNO™ (not included)

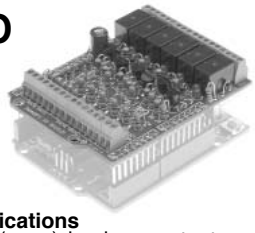
Specifications

- Data rates up to 10 Mbps
- Integrated MAC controller
- 8 kB Transmit / Receive Packet Dual Port Buffer
- MAC controller supports both Unicast, Multicast and Broadcast packets, has a programmable (up to 64-byte) pattern matching feature within a packet at user defined offset and programmable wake-up on multiple packet formats (Magic Packet, Unicast, Multicast, Broadcast, specific packet match or any packet)
- Uses pin 10 and 2 on an Arduino UNO™ board. It also uses the ICSP connector as a serial connection to the shield to free up I/O pins
- Dimensions: 68 x 53mm / 2.67 x 2.08"

Part No. 01VKKA04 • Price $27.50

velleman

I/O SHIELD FOR ARDUINO



MODEL: KA05

General purpose INPUT - OUTPUT shield for Arduino®

Also available as completely mounted module VMA05.

Features

- 6 relay outputs
- 6 analog inputs
- 6 digital inputs
- Downloadable sample sketch
- Stackable design: the shield can be stacked with other shields
- Large user community
- Requires 1 Arduino UNO™ (not included)

Specifications

- 1 A (max.) load per output
- 120 V max. per output
- Uses pin 8 to 13 as outputs, pin A0 to A5 as analog
- Inputs, and pin 2 to 7 as digital inputs
- Dimensions: 68 x 53mm / 2.67 x 2.08"

Part No. 01VKKA05 • Price $18.95

adafruit

MOTOR SHIELD FOR ARDUINO KIT

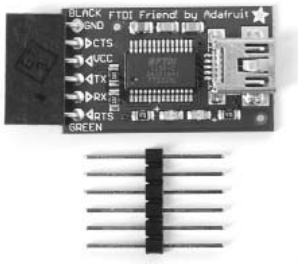
Here is a design for a full-featured motor shield that will be able to power many simple to medium-complexity projects.

- 2 connections for 5V 'hobby' servos connected to the Arduino's high-resolution dedicated timer - no jitter!
- 4 H-Bridges: L293D chipset provides 0.6A per bridge (1.2A peak) with thermal shutdown protection, internal kickback protection diodes. Can run motors on 4.5VDC to 25VDC.
- Up to 4 bi-directional DC motors with individual 8-bit speed selection (so, about 0.5% resolution)
- Up to 2 stepper motors (unipolar or bipolar) with single coil, double coil or interleaved stepping.
- Pull down resistors keep motors disabled during power-up
- **Motors and Arduino are not included.**

Part No. 01ADAMSAK • Price $19.50

adafruit FTDI FRIEND

The FTDI Friend is a tweaked out FTDI FT232RL chip adapter. Sure, like the well-known FTDI cable, it can provide power to your project and there are 4 signal lines for sending data back and forth. But the Friend can do much more! For example, you can change the signal and power lines to be either 3.3V or 5V. By default, we've set it up so that it matches our FTDI cables.



Part No. 01ADFTDI • Price $14.75

Arduino USB TO 5V SERIAL CONVERTER

This module transforms a USB port into a COM port. FTDI cable compatible, 5 volt. One can power and program the Arduino Ethernet board or any board with an FTDI compatible reader.

Part No. 01ARD59 • Price $13.95

MOBILE PLATFORM 4WD
ARDUINO COMPATIBLE

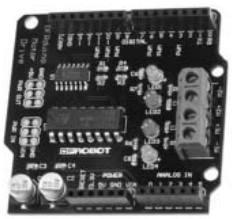
So you want to get mobile with your Arduino or other micro controller. The kit includes four geared motors, four rims with tires, and a high-strength aluminum alloy body with mounting holes. It can traverse grass, gravel, sand, or sloped surface with ease. Just add an Arduino, or other microcontroller, motorshield, and power supply and you ready to get going! We recommend the Romeo microcontroller, for it has built in motor control and additional buttons.

FEATURES:
- 4WD Arduino mobile robot development platform
- (4) high-quality micro-speed motors
- Tough aluminium body with mounting holes
- Variety of sensors can be added.

Part No. 01DFRROB0003 • Price: $59.95

MOTOR SHIELD FOR ARDUINO

This Motor shield for Arduino uses L293 chip which allow to drive two 7-12V DC motors with maximum 1A current. This shield can be directly mounted onto standard Arduino Duemilanove and Arduino Mega.



SPECIFICATIONS:
- 2 way 7-12V motor drive
- Up to 1A current each way
- PIN 4,5,6,7 are used to drive two DC motors
- Support PWM speed control

Part No. 01DFRDRI00001 • Price $16.50

Arduino ETHERNET SHIELD

The NEW Arduino Ethernet shield Rev3 allows an Arduino board to connect to a LAN using the Ethernet library.

New available features:
- Micro SD card connector with active voltage translators
- On board reset controller
- NOW Compatible with the Arduino MEGA board
- Available with POE at extra cost

Part No.	Description	Price
01ARDETHWO	Ethernet shield without POE Module	$55.90
01ARDETHPOE	Ethernet shield with POE Module	$78.90

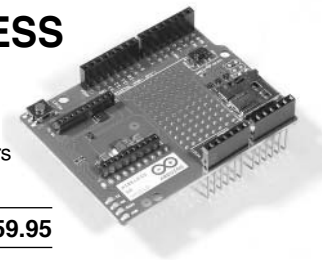
Arduino WIRELESS SHIELD

Arduino shield with a socket for wireless modules like Digi Xbee. Built in 3.3V regulator, active voltage translators and protoyping area.

Part No. 01ARD000064 • Price $24.95

Arduino WIRELESS SD SHIELD

Arduino shield with a socket for wireless modules like Digi Xbee. Built in 3.3V regulator, active voltage translators and protoyping area.



Part No. 01ARD000065 • Price $59.95

Arduino SHIELD - XBEE WITHOUT RF MODULE

Zigbee Shield for the Arduino Board. Allows board to communicate wirelessly. **Supplied without the RF Module.** Board comes fully assembled and tested.

Part No. 01ARDA000021 • Price $21.95

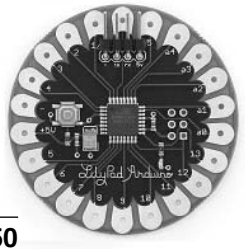
Arduino SHIELD XBEE

Zigbee Shield for the Arduino Board. The Zigbee module is the NEW Maxstream 2 Xbee ZigBee OEM RF Module with on board chip antenna, up to 100m distance transmission. Board comes fully assembled and tested (without Arduino board)

Part No. 01ARD00007 • Price $59.95

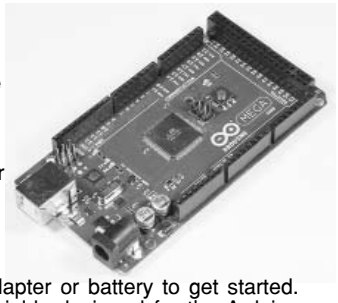
Arduino LILYPAD MAIN BOARD

The LilyPad Arduino is a microcontroller board designed for wearables and "e-textiles". It can be sewn into fabric with conductive thread. The board is based on the ATmega168V (the low-power version of the ATmega168). Board will run from 2V to 5V. Board comes fully assembled and tested with ATMega168V pre-loaded with bootloader.



Part No. 01ARDLPMB • Price: $28.50

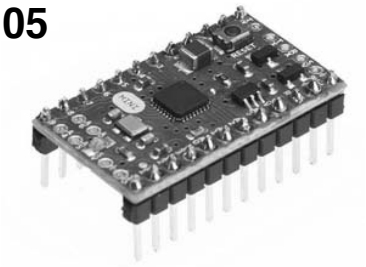
Arduino MEGA2560 REV3



The Arduino Mega 2560 is a microcontroller board based on the ATmega2560 (datasheet). It has 54 digital input/output pins (of which 14 can be used as PWM outputs), 16 analog inputs, 4 UARTs (hardware serial ports), a 16 MHz crystal oscillator, a USB connection, a power jack, an ICSP header, and a reset button. It contains everything needed to support the microcontroller; simply connect it to a computer with a USB cable or power it with a AC-to-DC adapter or battery to get started. The Mega is compatible with most shields designed for the Arduino Duemilanove or Diecimila.

Part No. 01ARD000067 • Price $59.95

Arduino MINI 05



The Arduino Mini is a small microcontroller board intended for use on breadboards and when space is at a premium. The revision 05 has a new package for the ATmega328 (datasheet), which enables all components to be on the top of the board. It also has an onboard reset button. The 05 version has the same pin configuration as revision 04.

Additional features coming with the 05 version are:

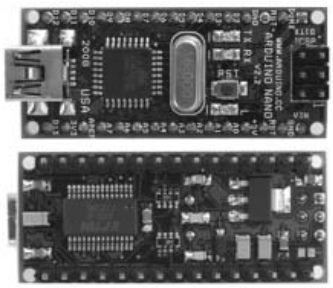
- **New PCB layout and design**
- **Onboard reset button**

The Arduino Mini has 14 digital input/output pins (of which 6 can be used as PWM outputs), 8 analog inputs, and a 16 MHz crystal oscillator. It can be programmed with the USB Serial adapter or other USB or RS232 to TTL serial adapter.

See the page on getting started with the Arduino Mini on instruction sheet. This product is sold with the pre-soldered pin headers on the two long sides.

Part No. 01ARDA000087 • Price $33.90

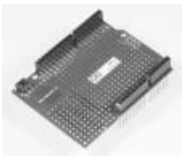
Arduino NANO



The Arduino Nano is a surface mount breadboard embedded version with integrated USB. It is small, complete, and breadboard friendly. It has everything that Diecimilia has (electrically) with more analog input pins and onboard +5V AREF jumper. Physically, it is missing power jack and power select jumper. Since the Nano is automatically sense and switch to the higher potential source of power, there is no need for the power select jumper.

Part No. 01ARDA0005 • Price $38.80

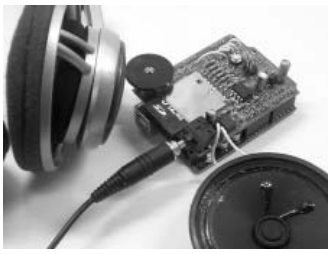
Arduino PROTO SHIELD REV 3 (ASSEMBLED)



Makes it easy to design custom circuits. Solder parts to prototyping area.

Part No. 01ARD000077 • Price $15.95

adafruit WAVE SHIELD FOR ARDUINO

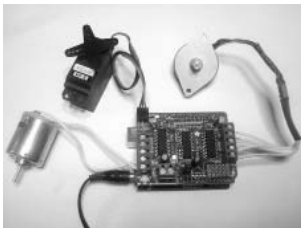


Adding quality audio to an electronic project is surprisingly difficult. Here is a shield for Arduinos that solves this problem. It can play up to 22KHz, 12bit uncompressed audio files of any length. It's low cost, available as an easy-to-make kit. It has an onboard DAC, filter and op-amp for high quality output. Audio files are read off of an SD/MMC card, which are available at nearly any store. Volume can be controlled with the onboard thumbwheel potentiometer.

This shield is a kit, and comes with all parts you need to build it. Arduino, SD card, tools, speaker and headphones are not included.

Part No. 01ADAPWSK • Price $22.00

adafruit MOTOR SHIELD FOR ARDUINO KIT

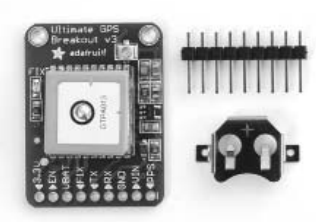


Here is a design for a full-featured motor shield that will be able to power many simple to medium-complexity projects.

- 2 connections for 5V 'hobby' servos connected to the Arduino's high-resolution dedicated timer - no jitter!
- 4 H-Bridges: L293D chipset provides 0.6A per bridge (1.2A peak) with thermal shutdown protection, internal kickback protection diodes. Can run motors on 4.5VDC to 25VDC.
- Up to 4 bi-directional DC motors with individual 8-bit speed selection (so, about 0.5% resolution)
- Up to 2 stepper motors (unipolar or bipolar) with single coil, double coil or interleaved stepping.
- Pull down resistors keep motors disabled during power-up
- **Motors and Arduino are not included.**

Part No. 01ADAMSAK • Price $19.50

adafruit ULTIMATE GPS BREAKOUT



Not only is this module easy to use, it comes fully loaded. The Ultimate GPS breakout is based on the MTK3339 chipset which can track up to 22 satellites on 66 channels, has a high-sensitivity receiver and a built in -165 db antenna. It's capable of 10hz updates, has a position accuracy of 1.8 meters, a velocity accuracy of .1 meters per second, and it only draws 20ma of current. It's also been successfully tested at over 88,000 feet.

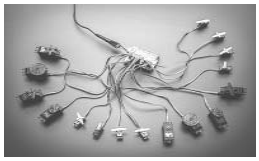
The most interesting feature of the Ultimate GPS Breakout is its built in data logger. The module includes an on-board microcontroller and enough FLASH memory to log the time, date, longitude, latitude and height every 15 seconds for up to 16 hours. All you need to do is send it a simple "start logging" command using an Arduino and it will begin.

The Ultimate GPS Breakout easily hooks up to an Arduino using the included library.

Part No. 01ADAGPS • Price $39.00

adafruit 16 CHANNEL SERVO SHIELD

You want to make a cool Arduino robot, maybe a hexapod walker, or maybe just a piece of art with a lot of moving parts. Or maybe you want to drive a lot of LEDs with precise PWM output. Then you realize that the Arduino has only a few PWM outputs, and maybe those outputs are conflicting with another shield! What now? You could give up OR you could just get our handy PWM and Servo driver shield. It's just like our popular PWM/Servo Breakout but now Arduino-ready and works with any Arduino that uses shields: Uno, Leo, Mega, ADK, its all good.



- Arduino compatible,
  12-bit PWM/ 16 ch servo shield

Part No. 01ARA1411 • Price $17.50

ARDUINO ADK REV 3

The Arduino ADK Rev 3 is a microcontroller board based on the ATmega2560 (datasheet). It has a USB host interface to connect with Android based phones.
It is compatible with Android's Accessory Development Kit examples. It has 54 digital input/output pins (of which 14 can be used as PWM outputs), 16 analog inputs,4 URTs (hardware serial ports), a 16MHz crystal oscillator, a USB connection, a power jack, an ICSP header, and a reset button.

Part No. 01ARDAKA069 • Price $78.95

ARDUINO YUN

This is a member new groundbreaking line of WiFi products combining the power of Linux with ease of use of Arduino. It is a combination of a classic Arduino Leonardo (based on the Atmega32U4 processor) with a WiFi system-ona-chip running Linino (a MIPS GNU/ Linux based on OpenWRT).
Arduino embedded the Linux machine directly on the PCB of the Arduino Leonardo and connected the two so that from Arduino it's very easy to run commands on the Linux side and use it as an Ethernet and WiFi interface.
The board has built-in Ethernet and Wifi support, a USB-A port, micro-SD card slot, 20 digital input/output pins (of which 7 can be used as PWM outputs and 12 as analog inputs), a 16 MHz crystal oscillator, a micro USB connection, an ICSP header, and a 3 reset buttons

Part No. 01ARD08YUN • Price $72.95

ARDUINO ON ANDROID KIT

- A kit with an Arduino Mega ADK that will allow you to connect with different Android based devices
- Build your own physical controller to your phone using some potentiometers. Make a simple robot using 2 continuous rotation Servo motors. Control your physical world with a relay module & many more projects.

Part No. 01ARDANDK08 • Price $228.95

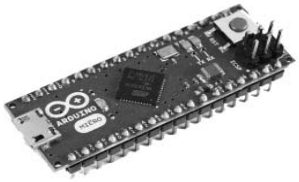
ARDUINO LEONARDO ATMEGA 32.4U

Using the ATmega32U4 as its sole microcontroller allows it to be cheaper and simpler. Also, because the 32U4 is handling the USB directly, code libraries are available which allow the board to emulate a computer keyboard, mouse, and more using the USB-HID protocol!

It has 20 digital input/output pins (of which 7 can be used as PWM outputs and 12 as analog inputs), a 16 MHz crystal oscillator, a micro USB connection, a power jack, an ICSP header, and a reset button. It contains everything needed to support the microcontroller; simply connect it to a computer with a USB cable or power it with a AC-to-DC adapter or battery to get started.

Part No.	Description	Price
01ARDLATA052	Board without headers	$24.95
01ARDLATA057	Board with headers	27.95

ARDUINO MICRO

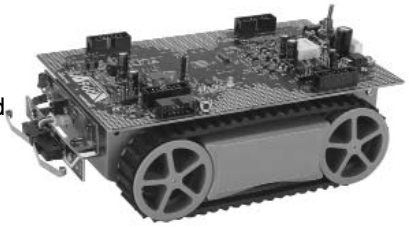


The Arduino Micro packs all of the power of the Arduino Leonardo in a 1.9" x 0.7" (48mm x 18mm) size. Although it may look like a stick of gum, it is actually a USB-native 8-bit microcontroller, with 32K of flash, and 2.5K of RAM. You can program it directly via the USB micro connector on one end (or for the advanced users, the 6-pin ISP header). The Arduino Micro is a microcontroller board based on the ATmega32u4.

Onboard is the processor, crystal, micro USB connection with fuse, Reset button, ISP low-level reprogramming header, ON LED, TX & RS LEDs, a extra user pin #13 LED, and a 3.3V regulator. You'll probably also want to pick up a micro-B USB cable to connect this board to your computer.

Part No.	Description	Price
01ARDMCRA093	Board without headers	$24.90
01ARDMCRA053	Board with headers	26.90

Global Specialties MODEL RP6V2 - PROGRAMMABLE ROBOTIC VEHICLE



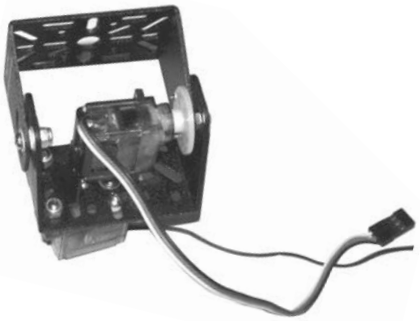
- ATBEGA32 8-bit RISC MicroC with 8 MIPS and 8MHz clock
- Comes fully assembled, no soldering needed for main unit
- Programmable in C. USB interface
- Stackable expansion boards available to build your own designs
  (selecting this option would require soldering your own circuits)
- Powerful tank trive train. large payload capacity
- Expansion manual, lots of example programs, huge C function library and all open source
- Numerous options for expansion and wireless control

Part No. 32GLRP6V2 • Price: $199.00

Options available for the RP6V2 bot

Part No.	Description	Price
32GLRP6V2M32	RP6V2 Microcontroller expansion (additional ATmega32 MicroC) High frequency. 14 free I/O ports. Enables interfacing your own circuits	$70.00
32GLRP6V2DSP	RP6V2 display blue, backlight display option connects to M32 or WIFI module	40.00
32GLRP6VEXP	RP6V2 expansion PCB option expansion PCB Plus hardware / connectors. Stackable	22.50
32GLRP6V2WIFI	RP6V2 WIFI module powerful expansion board can be used to add a wireless network connection via PC.	200.00

SENSOR PAN AND TILT KIT

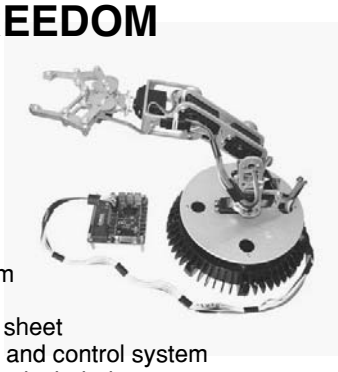


Includes 2 miniature servos
• Features mounting holes to suit almost any range sensor
• Hold the tilt servo and all the nuts, bolts etc.

The kit includes original brackets, two miniature servos, a new bracket to hold the tilt servo and all the nuts, bolts etc. This pan/tilt kit was designed by the members of "letsmakerobots.com", and has mounting holes to suit almost any range sensor.

Part # 29SPTK • Price: $14.75

ROBOTIC ARM WITH 6 DEGREES OF FREEDOM

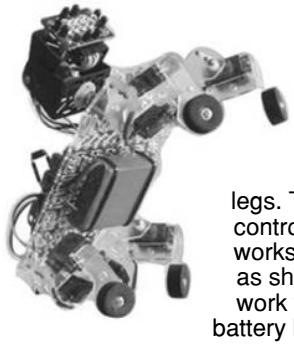


6 Degrees of Freedom Robotic Arm is made from 3mm thick aluminum sheet and uses 4x D servos for the base and the arm. The 2x micro servos operate the wrist and gripper. A serial interface and PC software is included. Since the arm has a few joints, we can imagine our human arm.

- 6 Degrees of freedom robotic arm
- Length: 390mm
- Made from 3mm thick aluminum sheet
- Wonderful mechanical structure, and control system
- A serial interface and PC software included
- Suitable for individual development and school competition
- Requires an external 4.5V to 6V power supply for the servomotors

Part # 01RA001 • Price: $256.00

PLAYFUL ROBOT PUPPY KIT



This kit comes with all parts except batteries. The controller comes with an ATmega8 but this is easily upgradeable if required. The sample code provided allows the puppy to sit, shake hands, lie down, beg and walk on it's hind legs. This robot is fully interactive and is controlled by hand gestures. The robot works best with a 7.4V 2300mAH battery as shown in the videos but it can also work with 6x NiMh AA batteries in a 3x2 battery holder.

- Arduinocompatible for easy programming
- Controller comes with an ATmega8 (easily upgradeable)
- No soldering is required

Part # 01PRKIT • Price: $155.00

ROVER 4WD TACKED CHASSIS W/SETTABLE GROUND CLEARANCE

Powerful 4WD tracked chassis great base for building a small tank type vehicle. Chassis includes a battery holder, two DC motors, and two encoders. You need a robot encoder and sensors forcomplete robot. Chassis clearance is changed by adjusting the angle of the gearbox assembly.

- Unique and powerful 4WD tracked chassis
- Adjustable clearance
- Stretchy rubber treads
- Comes with four motors and encoders
- Speed: 1Km/hr

Part # 01ROV5K • Price: $64.50

3-IN-1 ALL TERRAIN ROBOT

The 3-in-1 All Terrain Robot is a multi-function tracked mobile robotic kit. Utilize different track modules and make your robot transform into 3 amazing variations: the forklift, rover, and gripper. Using the wired controller, command the robot to move forward, backward, turn, grip and lift.

In forklift mode, the ATR is like a mini industrial fork lift, with the ability to lift up to 100 g in weight. In rover mode, the ATR's tank-like treads can traverse any type of surface. And in gripper mode, the ATR's strong arms grab and lift anything up to 100g, allowing you to move it to your desired location.

This kit allows students to create and recreate: Put it together, take it apart, make another module…It's all about flexibility, and intelligent thinking. But luckily, kids don't have to be robotics engineers to create and achieve. With the 3-in-1 All Terrain Robot, they learn as they play.
Requires 4xAA Batteries (not included)

Part No. 32OWI536 • Price $51.95

ROBOT – BABY

No need to solder. It comes assembled and pre-loaded with Arduino boot loader and demo software. It can be programmed via USB cable *(sold separately)*. Needs 4 NiCd or NiMh batteries *(not included)* and they can be trickle charged with built-in circuit.

Part No. 3200RBABY • Price: $59.95

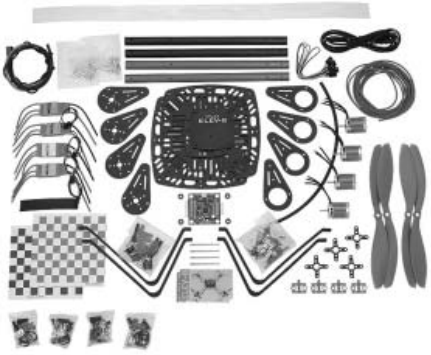
ROBOT CHASSIS
MAGICIAN

This kit comes with 2 geared motors, 2 wheels, 1 omni wheel, 1 battery holder, Speed board and several spacers and screws. Both motors will work on voltage from 3V-6V with a maximum stall current of about 1A depending on voltage and internal resistance of the motor driver circuit. The wheel is a standard RC car wheel with a good quality rubber tire.

Part No. 3200MOTCHS • Price: $24.95

PARALLAX ELEV-8 QUADCOPTER

The ELEV-8 quadcopter is a flying robotic platform that is lifted and propelled by four fixed rotors. There are no fixed wings; all of the lift is created from the rotors. Unlike standard helicopters a quadcopter uses fixed-pitch blades, whose rotor pitch does not vary as the blades rotate; control of vehicle motion is achieved by varying the relative speed of each rotor to change the thrust and torque produced by each.
The quadcopter uses a HoverFly board with a Propeller multicore microprocessor to electronically control stabilization of the aircraft. The benefits to this system are a stable platform, with no mechanical linkages for a small maneuverable and agile aircraft. The kit provides an inexpensive way to get involved in the quadcopter arena.
The kit includes; frame, mounting hardware, motors, speed controllers, propellers and the control board for flight stabilization. (the only thing you need to provide is the RC radio equipment, battery). We recommend a six channel RC radio.



- Open under body for camera mounting options
- Open Source; design files available online
- Highly modifiable, for custom additions
- Modular frame for fast repair
- Protective motor mounts
- Can fly with added payloads up to 2 lbs

Part # 32PX80000 • Price: $595.00

DRAWING ROBOT DOODLE BOT

This is a simple drawing robot that accepts commands from a universal TV remote control. It comes with all parts including Arduino compatible Magician Controller. Powered by 4 AAA alkaline batteries (not included) and a mini B USB cable (sold separately.) Magician Controller library has drivers for H bridge as well as IR receiver. Sample code included

Part No. 3200DBOT • Price: $54.95

LADYBUG ROBOT KIT

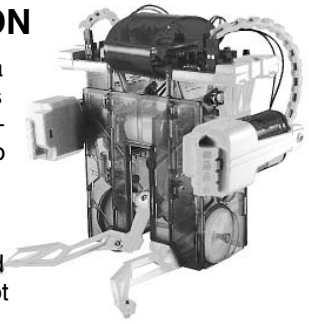
REQUIRES SOLDERING

The Ladybug Robot moves with six legs and makes use of infrared emitting diodes as its "eyes" to avoid obstacles along its path. Ladybug automatically makes a left turn the moment it detects an object in its path. It continues to move forward after that if there is no shadow in front of the sensor. The design of the Ladybug, which is based on two sets of legs, enables it to perform different sets of movements. Power Source: Four 1.5V "AAA" batteries (not included).

Part No. 3221885 • Price: $17.90

FOOTBALL (BOTBALL) ROBOT KIT

NON-SOLDER VERSION



The Botball Robot Football Kit is a remote controlled infrared wireless robot. Its microprocessor technology provided 4 different channels to have up to 4 Football Robots play together in your own arena. There are three motors, two for forward, backward, right left movement and one to kick the ball. Football Robot runs smoothly on 2 wheels.

- Clear illustrated directions
- No soldering required
- Tools needed: Long nose pliers, diagonal cutter, screwdriver
- Batteries not included

Part No. 3221533N • Price: $24.95

TITAN TANK ROBOT KIT

NO SOLDERING REQUIRED

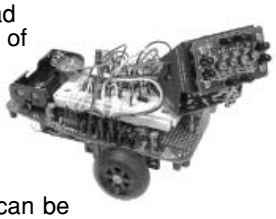
MODEL 21531N

Titan Tank Robot Kit is a wireless infrared remote control kit. Multi channel remote provides 4 different channels to have up to 4 Titan Tanks fight each other at the same time. Each Titan Tank Robot Kit fires 8 shots and is designed to make a sound when shooting. Once a Titan Tank is struck 4 times by an enemy tank, it will turn 360 degrees and make a sound like an ambulance. The Titan Tank then needs to be reset to play again. Six wheel drive allows the Titan Tank to move and turn smoothly.

- Clear illustrated directions
- Tools required: Long nose pliers, diagonal cutter, screwdriver
- Batteries not included.

Part No. 3221531N • Price: $29.95

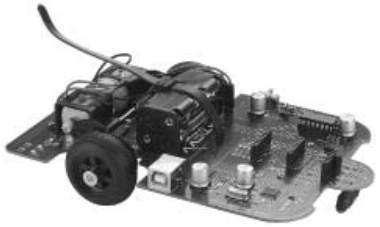
ROBOT KIT – MR. GENERAL



- Mr. General is a general purpose robot platform designed to allow students to easily build their first robot. The bread board provides a solder free method of connecting almost any processor to Mr. General's sensors and servos.
- Using 2 servos modified for continuous rotation, speed and direction of both wheels can be controlled using only 2 digital outputs.
  The 4 infrared sensors on the base can be used as analog or digital inputs for either edge detection or obstacle avoidance.
- Four indicator LEDs are wired in parallel with the IR LEDs and can be individually controlled.
  The pan / tilt universal sensor bracket is driven by two miniature servos allowing additional sensors / devices to be aimed by the processor using only 2 digital outputs.
  The infrared compound eye can be mounted on the pan/tilt assembly allowing the robot to track moving objects or detect obstacles up to 200mm away.
  Voltage rails can be isolated and connected to different voltages allowing the use of 3.3V and 5V devices together
- With the IR LEDS and sensors, two or more Mr. General can talk to eack other, which will allow us to organize a robot football match.

Part No.	Description	Price
3200MRGEN	Complete Robot Kit	$58.95
3200IRKIT	Infrared Compound Eye	7.95

Global Specialties ARDUINO ROBOT



- Ideal as intro to processor control electronics for education and hobby
- Comes fully assembled, no soldering required with base unit. Some soldering with expansion kits
- CD with software, manual and many extras
- ATmega328P, 8-bit AVR-RSC processor w/16MHz clock
- On-board odometer, line tracker, expansion capable
- 14 Digital I/O's on processor (9 free)
- Transfer data to PC via USB with optional Bluetooth

Part No. 32GLAAR • Price: $79.00

Options available for the AAR Arduino bot

Part No.	Description	Price
32GLARXWRL	A complete wireless radio set for communication via RF, which allows transmitter and receiver not having to be in visual contact for operation	$165.00
32GLARXULT	Asuro ultrasound distance measurement kit	30.00
32GLARXSNK	Asuro snake vision (heat sensing) kit	45.00
32GLARXEXP	Experiment Kit / expansion board kit for adding your own circuits	10.00
32GLARXDSP	Asuro display (connects direct to bot or to optional experiment board)	45.00
32GLARXBT3	Bluetooth kit - communication via infrared, RF and Android smartphone teaches about Bluetooth	55.00

Global Specialties BANSHI ROBOTIC ARM

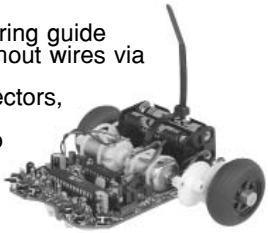
MODEL 680

Ideally suited for education. Learn the basics of electronics, mechanics and programming. Controlled by ATMEGA64 microcontroller. Programmable via open source tools in C. May be controlled via the included keyboard, or RACS software. I/O's enable the addition of extra modules. Easily download example programs provided via USB interface and write your own custom programs.

Features:
- Comes as kit. Requires assembly but circuit board is pre-assembled
- Expandable
- ATMEGA64 Processor
- I^2C Bus
- Easy downloads with RobotLoader Software

Part No. 32GLBANSHI • Price $195.00

Global Specialties ROBOT KIT ASURO



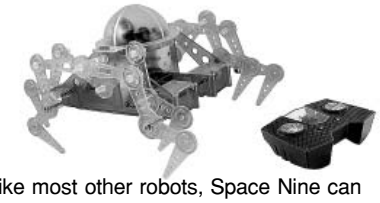
- Comes unassembled. Contains soldering guide
- Many cababilities include cruising without wires via PC control
- Optional line tracker, (6) collision detectors, motor speed measurement, on-board odometer sensor on both wheels, two independently controlled motors, geometric path movement, expansion capable read and transfer data wirelessly via optional Bluetooth module
- CD with software, training manual, supporting materials
- Numerous options for expansion, custom design, sensing/ measurement and communication

Part No. 32GLARX • Price: $99.00

Options available for the Asuro bot

Part No.	Description	Price
32GLARXWRL	A complete wireless radio set for communication via RF, which allows transmitter and receiver not having to be in visual contact for operation	$165.00
32GLARXULT	Asuro ultrasound distance measurement kit	30.00
32GLARXSNK	Asuro snake vision (heat sensing) kit	45.00
32GLARXMSP	Asuro Minesweeper (metal detector)	45.00
32GLARXEXP	Experiment Kit / expansion board kit for adding your own circuits	10.00
32GLARXDSP	Asuro display (connects direct to bot or to optional experiment board)	45.00
32GLARXBT3	Bluetooth kit - communication via infrared, RF and Android smartphone teaches about Bluetooth	55.00
32GLARX-BOOK	Asuro book volume 1	19.95

SPACE NINE ROBOT KIT



Space Nine is an eight-legged star explorer. You can control its moves and turns by a remote controlled infrared transmitter. Unlike most other robots, Space Nine can walk on rough surfaces, turn left, and right and even cross rocks.

SPECIFICATIONS:
- **Robot Power:** 4-AAA batteries *(not included)*
- **Transmitter:** 4-AA batteries *(not included)*
- Includes motor, gearbox and all parts
- Easy to follow detailed instructions
- Solder and non-solder versions
- Requires basic hand tools: Long nose pliers, diagonal cutter and screwdriver

Part No.	Description	Price
3221532N	Non-solder Version	$28.95

OWIKIT™ ROBOTIC ARM EDGE

NO SOLDERING REQUIRED

Riding the wings of the award winning Robotic Arm Trainer, OWI has made robotic arm technology more affordable without compromising quality. With Robotic Arm Edge, command the gripper to open and close, wrist motion of 120 degrees, an extensive elbow range of 300 degrees, base rotation of 270 degrees, base motion of 180 degrees, vertical reach of 380mm, horizontal reach of 320 mm, and lifting capacity of 100g. WOW! Some of the added features include a search light design on the gripper and a safety gear audible indicator is included on all five gear boxes to prevent any potential injury or gear breakage during operation. How does this equate to fun? Total command and visual manipulation using the 5s: five switch wired controller, five motors, and five joints. Night time play is possible and extended life on the gearbox to prolong your control and predictions of the robot's behavior.

Specifications:
- Battery: 'D' size battery x 4;
- Dimension: 9" L x 6.3" W x 15" H;
- Weight: 658g

USB INTERFACE (PART NO. 32OWI535-USB)

Now robot lovers can connect the Robotic Arm Edge to a PC and have real time manual control of the robotic arm and program the arm to perform a sequence of movements – just like an actual robot on an assembly line. The USB Interface Kit comes complete with a CD, printed circuit board, USB cable and accessories, and a detailed instruction manual

ACTIVITIES AND EXPERIMENTS CURRICULUM (PART NO. 32OWIEXP535)

This CD curriculum provides multiple step-by-step activities and experiments for the Robotic Arm Edge robot in both manual and computer control modes. Students are challenged to measure and record robot specifications, perform experiments, solve problems, record data, reflect about their activities and answer questions in each robot lab activity. Using the site license that comes with the product, directions may be read off a computer screen or made into printed masters and copies. This curriculum when combined with the Robotic Arm Edge creates numerous and flexible educational opportunities for students. Answer keys provided. This is a flexible robotics curriculum for individual student use, home schools, science museums, and schools. CD is Mac and PC compatible.

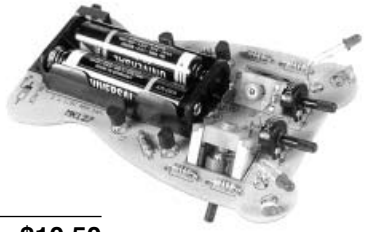
SPEECH INTERFACE KIT OPTION (PART NO. 32RS07)

Available in kit version *(soldering required for this option*), the speech interface kit works in conjunction with the speech recognition, which is also a soldering project. Both kits are needed if you wish to have speech recognition capabilities with the Robotic Arm. Using these kits with the Arm permits experimentation with speech recognition and control technology. Train the speech recognition circuit with words you want to use to control the Robotic Arm. While the Speech Recognition kit can function as a stand alone unit, if you wish to have speech recognition capabilities with the Robotic Arm, both the speech recognition kit and the speech interface kit are necessary.

Part No.	Description	Price
32OWI535	Robotic Arm Edge – No Soldering Required	$49.95
32OWI535-USB	Arm Edge PC Interface – USB (Assembled)	30.95
32OWIEXP535	Arm Edge Activities Curriculum CD	20.95
32SRI01	Speech Interface Kit *(**Requires Soldering** and the **Speech Recognition Kit #32SR07**)*	75.00
32SR07	Speech Recognition Kit *(**Requires Soldering** and the **Speech Interface Kit #32SRI01**)*	95.00

velleman·kit RUNNING MICROBUG

Soldering project. Light-attracted, bug-shaped robot kit. Advances toward light source. Adjustable. Stops in total darkness.



Part No. 32VMK127 • Price: $10.50

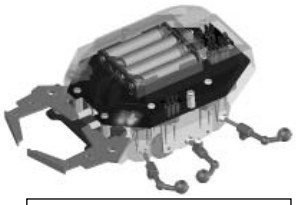
velleman·kit CRAWLING MICROBUG

Soldering project. Bright colored, bug-shaped robot kit. Advances toward light. Two open chassis sub-mini motors. Adjustable light-sensitivity and speed. Choose between two different walks. Stops in total darkness.

Part No. 32VMK129 • Price $11.95

SCARAB ROBOT KIT

Scarab is a robot that makes use of two touch sensors to detect obstacles. When its antennae (touch sensor) detect an object in its path, Scarab will go backward first and automatically follow a two-step maneuver to help it overcome the obstacle, which can be a combintion of "Left Turn", "Right Turn", "Reverse", "Stop". The Scarab Robot can be configured with different sets of movements. The kit comes complete with 2 sets of differently designed legs, which provide endless fun and excitement with its different sets of movements.

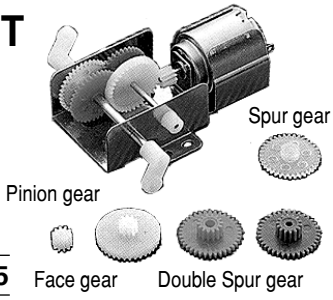


Power Source: Four 1.5V "AAA" Batteries *(not included).*

Part No. 3221884 • Price $21.90

2-IN-1 GEARBOX KIT

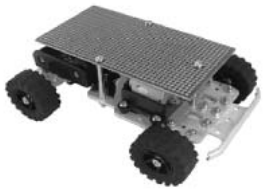
Includes motor, 2 sets gears, metal shafts, gearbox and additional accessories to create different gear ratios, RPM and speed.



Part No. 3221130 • Price: $5.25

ROBOT – BASIC

This is a basic 4WD chasis ideal for small robots. it has an aluminium base, 2 motors/gearboxes and AA x 3 battery holder. The prototype PCB on top is double-sided with plated through holes.



Part No. 3200RBASIC • Price: $28.95

SOUND SENSOR CAR

SOLDERING

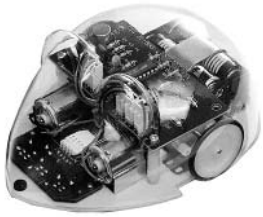
Robot car uses condensor microphone as sensor, and reverses direction whenever it detects noise (hands clapping), or touches an obstacle. 2 x AA batteries (not included).

Part No. 3221881 • Price: $11.95

LINE TRACKING MOUSE

SOLDERING

Smart mouse robot that tracks a black line (use black tape against white background). Create twists and turns for mouse to find its target. Three photo-interrupters helps it find its way. Sound activated, programmed IC, two sets (unassembled) gear motors. 4 x AA batteries *(not included.)*

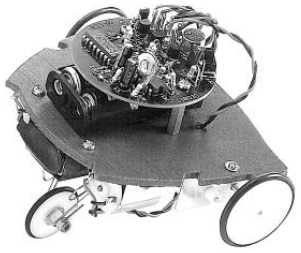


Part No. 3221880 • Price: $19.50

TURNING FROG

SOLDERING

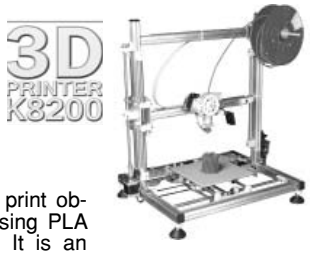
When this robot detects sound, it will move, and repeat following turns in sequence: forward, stop, left turn, stop, right turn, stop. Includes 2 sets (unassembled) gear motors. 2 x AA and a 9V battery *(not included)*.



Part No. 3221882 • Price: $14.50

velleman 3D PRINTER KIT

PRINT 3D INDUSTRIAL DESIGN AND ENGINEERING PROJECTS (MAC, WIN OR LINUX)
THIS ADVANCED KIT REQUIRES MECHANICAL, ELECTRONICS AND COMPUTER SKILLS



It's a build it yourself 3D printer kit to print objects of maximum 20 x 20 x 20 cm using PLA or ABS filament (3 mm plastic wire). It is an extremely fast, reliable and precise printer even when printing at higher speeds. The K8200 is compatible with all free RepRap software and firmware. It is made out of aluminum and easy to assemble leaving room for modifications. The print bed is heated.

Specifications
- Linear ball bearings: 8 and 10 mm (0.314" and 0.393")
- Technology: FFF (Fused Filament Fabrication) for PLA and ABS
- Power supply: 12 V / 3 A max.
- FTDI USB 2.0 to Serial
- Dimensions of printable area: 20 x 20 x 20cm / 7.87 x 7.87 x 7.87"
- Typical printing speed: 120 mm/s
- Maximum print speed: 150 to 300 mm/s
- Extrusion nozzle: 0.5 mm
- Extrusion thermistor: NTC 100K
- Extruded aluminum profiles: 27.5 mm / 1.08" wide
- Movement: 4 NEMA 17 stepper motors

Nominal mechanical resolution:
- X and Y: 0.015 mm / 590.55 in (smallest step the printing plate can move in the X and Y direction)
- Z: 0.781 m / 30.74 in(smallest step the printing plate can move in the Z direction)

Nominal printing resolution:
- Wall thickness (X,Y): 0.5 mm / 0.019"
- Layer thickness (Z): 0.20 - 0.25 mm / 0.0078 - 0.0098"

Dimensions:
- Width: 50cm / 19.7"
- Depth: 42cm / 16.5"
- Height: 62cm / 24.4"
- Weight: 9Kg / 19.84lbs

Software/Hardware:
Repetier 3D Printer driver version 0.84 and up www.repetier.com. Open source hard and firmware are based on the GNU open source communities of RepRap and Sanguinololu. (See http://RepRap.org)
The printer requires a computer to print (MAC, WIN or LINUX) and an internet connection to use the online manual and building instructions.

Part No.	Description	Price
32VKK8200	3D Printer Kit	$795.00
3D PRINT MATERIAL		
32VKPLA3P1	3mm PLA Filament - Pink - 1kg	39.00
32VKPLA3R1	3mm PLA Filament - Red - 1kg	39.00
32VKPLA3Y1	3mm PLA Filament - Yellow - 1kg	39.00
32VKPLA3G1	3mm PLA Filament - Green - 1kg	39.00
32VKPLA3B1	3mm PLA Filament - Black - 1kg	39.00
32VKPLA3N1	3mm PLA Filament - Natural - 1kg	39.00
32VKPLA3O1	3mm PLA Filament - Orange - 1kg	39.00
32VKPLA3W1	3mm PLA Filament - White - 1kg	39.00
32VKPLA3U1	3mm PLA Filament - Blue - 1kg	39.00

FLASHFORGE 3D PRINTER, DUAL EXTRUDER WITH 2 SPOOLS

Package contains: Unit, 2 spool holders, 2 spools of filament (IKGea), 2 filament guide tubes, Feet, bolts and Hex Wrench Kit, Power Supply Cable, USB Cable.

This is a high quality, dual extruder, 3D printer.

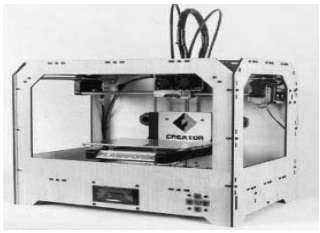


FIGURE A

FIGURE B

Technical Specifications
- 5 axis, 1/16 micro-stepping motor control
- 4x20 LCD Character display and multi-direction control pad
- Universal Power Supply: 100-240V, 50/60 Hz

Software: Replicator G
- Compatibility: Linux, OSX & Windows
- Print from SD card or over USB
- Input file type; STL, gcode, x3g

Printing
- Build envelope: 225 x 145 x 150 mm
- Build volume: About 5 liters
- Layer thickness: 0.1-0.3 mm (adjustable)
- Nozzle diameter: 0.4 mm
- Speed: 40-15 mm/s(adjustable)
- Flow Rate: Approximately 24 cc/hr

Model Creator (Fig A) - Use ABS filament (1.75 mm), Wood frame

Model Creator X (Fig B) - Uses ABS or PLA filament (1.75 mm) metal frame, high temp. resistant, aluminum plate, LED light & corner settings to secure Y transmission

Part No.	Fig	Description	Price
01FF3D1	A	Model with 2 ABS spools	$1195.00
01FF3D2	B	Model with 1 ABS spools/1PLA spool	$1195.00
01FFABS01		ABS spool 1 Kg (1.75mm) - yellow	34.99
01FFABS02		ABS spool 1 Kg (1.75mm) - black	34.99
01FFABS03		ABS spool 1 Kg (1.75mm) - green	34.99
01FFABS04		ABS spool 1 Kg (1.75mm) - white	34.99
01FFPLA01		PLA spool 1 Kg (1.75mm) - yellow	34.99
01FFPLA02		PLA spool 1 Kg (1.75mm) - black	34.99
01FFPLA03		PLA spool 1 Kg (1.75mm) - green	34.99
01FFPLA04		PLA spool 1 KG (1.75mm) - blue	34.99

PARALLAX SERVO MOTORS

Parallax servos are made exclusively by Futaba. They are recommended for robotic projects. Servos may be controlled directly from a BASIC Stamp I/O pin by using the "PULSOUT' command. Continuous rotation servo includes an adjustable potentiometer to center the servo. Wt. 45.0 grams. Torque: 3.40 kg-cm.

Part No.	Description	Price
32PX900-00005	Standard Servo	$12.95
32PX900-00008	Continuous Rotation Servo	12.95

SERVO MOTORS

Ideal for robotic projects. All specs are at 4.8 / 6 volts

Part No	Description	Size	Torque	Wt. Gms.	Price
29SV40	Standard	40x20x36	3.2	36g	$8.50
29SV41	Standard	28x13x37	2.5	17g	6.95
29SV50	Continuous Rotation	41x20x37	3.5	38g	8.95
29SVACCKIT For servo motors. Accessory kit with 4 different types of connecting wheels					1.75

HITEC SERVO MOTORS

Ideal for robotic projects. All specs are provided at 4.8/6 volts.

HS55

HS311

Part No.	Model	Torque kg/cm	Size mm	Wt. gm	Price
29SV10	HS311	3.0/3.7	40x20x37	43	$12.95
29SV11	HS422	3.3/4.1	41x20x37	46	16.50
29SV12	HS55	1.1/1.3	23x12x24	8	18.00
29SV13	HS65HB	1.8/2.2	24x12x24	11	31.50
29SV14	HS645MG	7.7/9.6	41x20x38	55	52.00
29SV16	HS755HB	13.2	59x29x50	110	36.00
29SV17	HS765HB	13.2	59x29x50	110	44.00
29SV18	HS81	3.0	29x12x29	17	24.00
29SV19	HS85BB	3.5	29x13x30	19	32.00
29SV20	HS325HB	3.7	40x20x37	43	16.75
29SV21	HS322HD	3.0/3.7	40x20x36	43	11.50

HITEC DIGITAL SERVO MOTORS

HS5085MG

Part. No.	Model	Torque	Size In.	Wt. Oz.	Price
29SV60	HS5055MG	21 oz-in	.89x.45x.94	0.33	$22.60
29SV61	HS5056MG	25 oz-in	.88x.45x.94	0.45	35.60
29SV62	HS5065MG	31 oz-in	.92x.45x.94	0.42	39.25
29SV63	HS5084MG	26 oz-in	1.14x.51x1.16	0.75	44.95
29SV64	HS5085MG	60 oz-in	1.14x.51x1.18	0.77	39.25
29SV65	HS5765MH	280 oz-in	2.32x1.14x2.04	6.07	72.25

SERVOMOTOR CONTROLLERS

KITS AND ASSEMBLED VERSIONS

MODEL SMC04 – Four Servomotor Controller
MODEL SMC05 – Five Servomotor Controller
MODEL SMC08 – Eight Servomotor Controller

- Allows control of hobby servomotors (Hitec/Futaba).
- Servomotors may be controlled manually via on-board switches ***(Models SMC04 and SMC05)***, or by a Windows program (CD included, updates available for download)
- PC Control: adjustable servomotor speed control. Each servo controlled by an individual slider.
- Manual control: each servomotor controlled using a three-position switch on the board. ***Models SMC04 and SMC05*** offer both manual and PC control. ***Model SMC08*** features PC Control only.

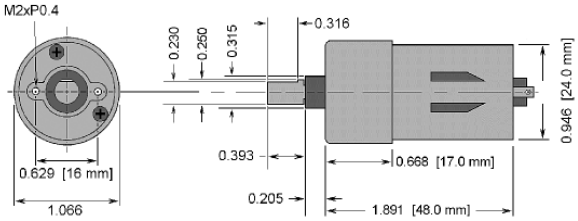
SMC08

Operates on 9V battery or with AC adapter *(not included)*

Part No.	Description	Price
32SERVO4K	Kit version – 4 servomotor controller	$69.00
32SERVO4A	Assembled version – 4 servomotor controller	115.00
32SERVO5K	Kit version – 5 servomotor controller	79.00
32SERVO5A	Assembled version – 4 servomotor controller	130.00
32SERVO8K	Kit version – 8 servomotor controller	56.00
32SERVO8A	Assembled version – 8 servomotor controller	95.00
16SMC9V	AC adapter for servomotor controllers	12.00

GEAR HEAD MOTOR – 12VDC –

PERFECT FOR ROBOTIC APPLICATIONS



Reduction Ratio: 76.8 to 1
Motor Speed: 4500 RPM @ 12 VDC
Shaft Speed: 58 RPM @ 12 VDC
Motor Current: ≤ 60mA @ No-Load
Torque: 0.43 kg - cm = 6 oz - in.

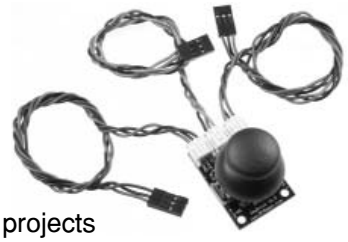
Part No.	1-9	10+
29GHM	$10.95	$9.75

GEARMOTOR 12V WITH ENCODER

- Powerful 12 V brushed DC motor with a 50:1 metal gearbox
- Integrated quarature encoder with a 64 counts per revolution
- Size 2.6" x 1.5" with 0.6" long 6mm D-shaped shaft
- Speed 200 RPM, stall torque 200 oz-in, stall current 5A all at 12V

Part No. 29GB37Y3530-50 • Price $38.95

JOYSTICK MODULE



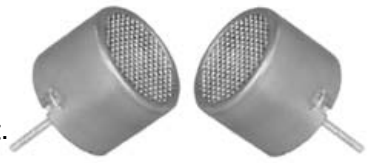
SPECIFICATIONS:

- Useful for many robotics projects
- Connect to two analog inputs, robot is at your command with X, Y control. This module can easily be connected to Arduino

Part No. 01DFR0061 • Price: $10.75

RSR ULTRASONIC SENSORS

MOTION OR DISTANCE SENSING

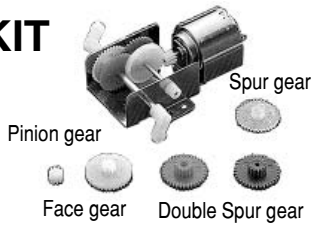


- Transmitter/ receiver sensing
- Plastic housing
- **Freq**.: 40KHz
- **Capacitance:** 2000pf
- **Size:** 16mm dia, 12mm ht.
- **Lead spacing:** 10mm
- **Range:** 20ft.

Part # 29ULTRASONIC • Price: $3.95

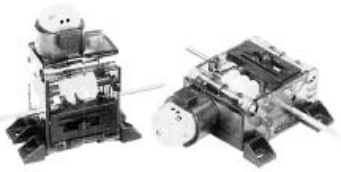
2-IN-1 GEARBOX KIT

Includes motor, 2 sets gears, metal shafts, gearbox and additional accessories to create different gear ratios, RPM and speed.



Part No. 3221130 • Price: $5.25

OWIKIT™ GEAR BOX KIT



35 piece kit for learning about gear ratios. Great for adding gear box to robotic projects. See through case with 3V DC motor. Gear ratios from 6.8:1 to 807.93:1

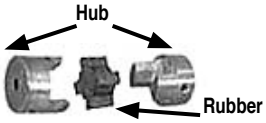
Part No. 29OWIGB25 • Price: $15.95

HUB

Hub to accept 1/4" shaft. Can be mounted to most wheels (with set screws).

Part No.	Description	Price
23HUB1	Hub 1/4" Bore	$12.90

COUPLERS SPIDER



Used with motors. Hub OD: .625"D, Length: .56". Comes with 1 set screw/hub

Part No.	Description	Price
29HUB2	.125" (3.18mm) Hub	2.25
29HUB3	.197" (5mm) Hub	1.75
29HUB4	.250" (6.35mm) Hub	1.95
29RS1	Rubber Spider	1.95

ULTRA-MICRO COLOR CAMERA

MODEL 29ECMP02

- Low cost, color pinhole lens camera. Only 5/8" x 5/8" x 5/8".
- 1.5 lux sensitivity
- 380 lines resolution
- 12VDC 100MA operation / power adapter not Included

Part No.	Description	Price
29ECMP02	Color Camera	$49.00
16DEPS12800	12VDC Switching Power Supply	6.95

PARALLAX PING)))™ ULTRASONIC SENSOR

Provides distance measurements between moving or stationary objects. Applications include robotics and security. Activity status LED indicates an "in-progress" measurement. Works via ultrasonic pulse which is transmitted from the unit. The time it takes for the echo to return from the target calculates the distance measurement. Easy interfacing with BASIC Stamp and Javelin Stamp. On-board 3-pin header can simply be plugged into the Boe-Bot's solderless breadboard. 5 V operation. Range – 2 cm to 3.35 m. (.8" to 11.3 ft.)

Part No. 32PX28015 • Price: $29.90

GEAR HEAD AND STEPPER MOTORS
SEE PAGE 269

BASIC ROBOT PLATFORM

BUILD YOUR OWN ROBOT – AND THIS IS NOT SOME WIMPY BOT

COMES ASSEMBLED AS SHOWN

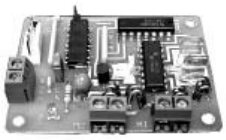
Wheeled platform 7 inch octagon made from .1 in. gauge aluminum.

INCLUDES

- Two 12V DC gearhead motors
- Two wheels (with rubber "tires")
- Ball Caster
- Expansion Platform
- 4 pre-drilled spacer plates
- *Optional battery, motor control, micro-controller*

Part No. 01BRPL • Price: $109.95

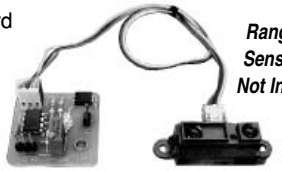
DUAL H-BRIDGE BOARD



Ideal for robotics applications. Allows independent control of two separate DC motors in the range of 8 to 24 Volts at up to 1 Amp of current. Can be pulse-width modulated to control speed. Two optically isolated inputs for each motor: RUN/STOP and FORWARD/REVERSE. Inputs can be made non-isolated via jumper. Built-in thermal shutdown protection.

Part No. 01DHBRBD • Price: $25.95

INFRA-RED TRANSDUCER BOARD



Great for robotics applications. This board is designed to interface with the SHARP GP2D12 analog-output infra-red range sensor. Our board has a comparator and a 10-turn trim-pot to set a specific range. When target comes within range, an open-collector output goes low and an on-board LED lights. Gives more flexibility compared to the fixed-range digital-output version of the SHARP transducer.

Part No.	Description	Price
01INFRDTRKIT	Kit Version	$24.00
01INFRDTRASSM	Assembled	29.00

TRANSMITTER-RECEIVER MODULE

- Ideal for remote controls, telemetry
- Stable output

SPECIFICATIONS OF TRANSMITTER
—Frequency: 433MHz
—Modulation: ASK
—Circuit Shape: SAW
—Date Rate: 100kbps
—Peak Output Power: 10mW
—Power Supply: 3 ~ 12V DC

SPECIFICATIONS OF RECEIVER
—Range: 220yd in open air
—Frequency: 433MHz
—Modulation: AM
—Sensitivity: 3 Vrms
—Power Supply: 4.5-5.5V DC
—Digital and linear output

Part No.	Description	Price
26VK900-6895	Receiver Module	$9.50
26VK900-6896	Transmitter Module	7.50

ULTRASONIC SENSORS

- Used for motion or distance sensing
- Ideal for robotic applications
- **Size**: 16mm dia., 12mm ht.; **Lead Spacing** 10mm
- **Range** 0–20 ft.; **nominal freq.:** 40KHz; **max input volt:** 20V; **operating temp.:** –4 F to 185F

Part No.	Description	Price
26MA40A5R	Ultrasonic Receiver	$3.95
26MA40A5S	Ultrasonic Sensor	3.95

SHARP DISTANCE SENSORS

Infrared sensors have an analog output which varies with distance. 3-JST interface wire sold separately

Part No.	Description	Price
08GP2Y0A21YK	Detection range 10-80cm	$14.95
08GP2Y0A41SK	Detection range 4-30cm	$8.95
08GP2Y0A60SZ	Detection range 10-150cm	$8.95
05JST3	Interface wire 3 conductor	$1.95

PARALLAX SENSOR SAMPLER KIT

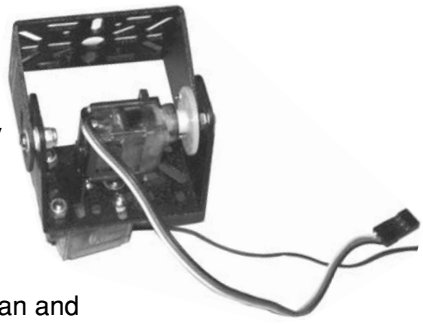
This kit is a collection of Parallax's most popular sensors

Kit Includes:

- Memsic 2125 Accelerometer
- Sensirion Temperature and Humidity Sensor
- Flexiforce Demo Kit
- PING))) Ultrasonic Sensor; PIR Sensor
- Hitachi HM55B Compass Module
- Hitachi H48C Tri-Axis Accelerometer Module
- Piezo Film Vibra Tab Mass
- Melexis 90217 Hall-Effect Sensor
- 3/8 Diameter, 1/8 Thick NdFeB Plate Magnet

Part No. 32PX28028 • Price: $158.95

SENSOR PAN AND TILT KIT



Includes 2 miniature servos

• Features mounting holes to suit almost any range sensor

• Hold the tilt servo and all the nuts, bolts etc.

This is the Dagu Mini Pan and Tilt Kit. The kit includes original brackets, two miniature servos, a new bracket to hold the tilt servo and all the nuts, bolts etc. This pan/tilt kit was designed by the members of "letsmakerobots.com", and has mounting holes to suit almost any range sensor.

Part # 29SPTK • Price: $14.75

ROBOT ACCESSORIES

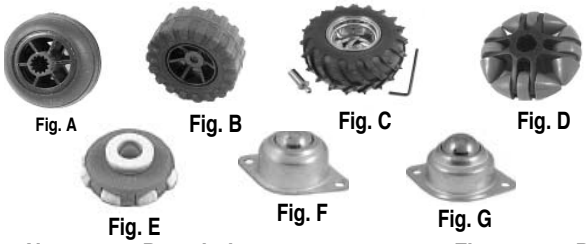


Fig. A Fig. B Fig. C Fig. D Fig. E Fig. F Fig. G

Part No.	Description	Fig.	Price
23WH38	Wheel / 38mm Dia	A	$0.95
23WH36	Wheel / 36mm Dia.	B	0.95
23WH120	Wheel / 120mm Dia	C	9.95
23OMW1	Omni Wheel	D	3.95
23OMW3	Omni Wheel	E	4.95
23SCB1	Steel Caster Ball Mounting Holes 2 1/4"	F	1.95
23SCB2	Steel Caster Ball Mounting Holes 1 1/2"	G	2.75

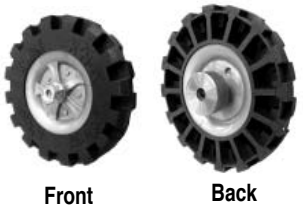
WHEELS / ROBOTIC

Neoprene Wheel:

- 3" diameter,
- Thickness 0.7",
- Motor hub drilled for 1/4" shaft
- Motor hub diameter 0.88"
- Motor hub thickness 0.42"
- 10-32 set-screw

Part No.	Description	Price
23WNP	Neoprene, 3" dia.	$12.00

WHEEL – RUBBER

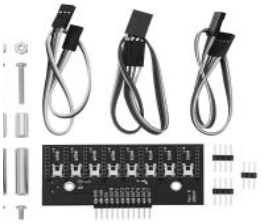


Front Back

- 3.5" diameter
- Thickness 0.5"
- Motor hub drilled for 1/4" shaft
- Motor hub diameter 0.88"
- Motor hub thickness 0.42"
- 10-32 set-screw

Part No. 23WRB • Price: $12.00

PARALLAX INFARED LINE FOLLOWER KIT



The Infrared Line Follower Kit from Parallax provides eight infrared emitter and receiver pairs for high-precision line-following applications. Mounting hardware for both the Boe-Bot and Stingray are also included for easy startup. All IR frequency generation is done onboard using an ICM7555 chip, requiring no external signaling.

This allows for simple interfacing to the Infrared Line Follower.

Part # 32PX28034 • Price: $34.95

PARALLAX REED SWITCH WITH MAGNET

This reed switch works like a standard switch but uses a magnetic field rather than a push button or toggle lever. This is the same type of switch used in many security systems to detect a window or door being open. The Reed Switch comes with a magnet to get you started. Please see the documentation for more information and example code.

Part No. 32PX910-27225 • Price: $10.95

MULTIPLE SENSOR KIT

Made up of light sensor, touch sensor, temperature sensor, magnetic sensor, vibration sensor, tilt sensor, big button, LED lighting module and Grayscale.

Part No. 26DFR0018 • Price $39.50

MINI TOUCH SENSOR

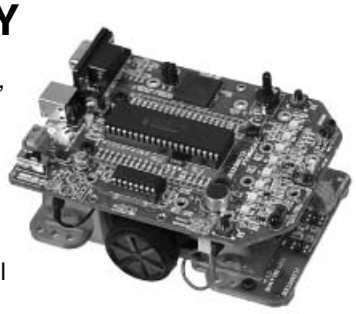
You can hook it up to the IO Expansion shield (for arduino) directly. It includes a metallic tape with a sticky side. This makes it possible for you to place your sensors anywhere you want. So, if you get sick of the typical push buttons, try this invisible button for your projects! This touch sensor works on a variety of surfaces; Metal, glass, plastic, rubber. It does not work on cardboard or wood. NOTE:This sensor requires some basic soldering.

PIN CONFIGURATION:
- Digital output (Green wire)
- Power (Red wire)
- GND (Black wire)

Part No. 26DFR0104 • Price $7.90

matrixmultimedia

FORMULA FLOWCODE MAZE SOLVING BUGGY



Learn, design and race with Formula Flowcode. A complete, all-in-one robot and software curriculum. Formula Flowcode is a robot vehicle which is used to teach robotics and provide a platform for robotic competitions. Comes with pre-assembled controller circuit board and and chassis. Final assembly using posidrive screwdriver is all that is required. No soldering.

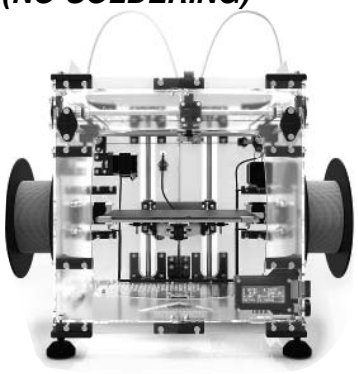
- Programmable robot vehicle
- Motivating technology teaching resource
- Complete solution package: robot + software + curriculum
- Advanced PICmicro 18 series microcontroller
- USB programmable.
- Line following, maze solving and much more

Formula Flowcode is compatible with the **E-blocks** range of products which means that it can be expanded with a range of additional boards including graphical LCD displays, and Bluetooth.

Part No	Description	Price
01HP794	Formula Flowcode Buggy	$136.00
01HP926	Starter class bundle – includes 5 Formula Flowcode Kits, 1 set of maze walls, Storage tray and 10 user version "Intro to Micro-C Programming"	900.00
01HP454	Pro class bundle – 10 Formula Flowcode Kits, set of maze walls, site license Flowcode V3, site license "Intro to Micro-C Programming", 5 LCD displays and IDC cables and two storage trays	3,000.00

velleman **VERTEX 3D PRINTER KIT**

ASSEMBLY REQUIRED (NO SOLDERING)



Next generation 3D printer kit: Easy, accurate, affordable, and open source.

Printing:
- Print technology: Fused Filament Fabrication (FFF)
- Layer resolution: standard: 0.1 mm (maximum: 0.2 mm - minimum: 0.05 mm)
- Build plate: 215 x 240 mm (8.46" x 9.45")
- Build volume: 180 x 200 x 190 mm (7" x 7.8" x 7.5")
- Print speed: 30 mm/s - 120 mm/s
- Travel speed: 30 mm/s - 300 mm/s
- Build plate surface: Removable layer of BuildTak™
- (consumable; also sold separately)
- Filament diameter: 1.75 mm (accepts all filament spools with a mounting hole = 53 mm).
- Open filament policy.
- Prints: PLA, ABS
- Testing with other materials in progress.
- Nozzle 1&2 diameter: 0.35mm
- One nozzle supplied. Second nozzle optional.
- Distance between nozzles: 23.7 mm
- Maximum nozzle operating temperature: 270 C

Software:
- Firmware: Modified Open Source Marlin 3D Printer
- Firmware - user upgradable
- Software: Repetier - CuraEngine - Slic3r
- (RepRap compatible)

Hardware:
- Dimensions: X Y Z 360 - 380 - 395 mm
- (14" x 15" x 15.5") (without filament spools)
- Frame: Polycarbonate panels and fibre reinforced molded ABS parts

Electrical:
- Communication: USB 2.0 or SD card
- Controller board: AVR ATmega2560 based
- Dual head and heated bed capable
- Display: 4 x 20 char. blue LCD with white backlight
- AC input: 100 - 240 VAC 50-60Hz 150W max.

Part No.	Description	Price
32VK8400	3D Printer Kit w/ One Nozzle	$895.00
32VK8402	Second Nozzle for 3D Printer	$195.00

MOISTURE SENSOR

This moisture sensor can read the amount of moisture present in the soil surrounding it. Its ideal for monitoring an urban garden' water level. This is a must have tool for a connected garden!
This sensor uses the two probes to pass current through the soil, and then it reads that resistance to get the moisture level. The IO Expansion Shield is the perfect shield to connect this senor to Arduino.

Part No. 26DFRSEN0114 • Price $5.90

PARALLAX STAMPWORKS

MICRO-CONTROL YOUR WORLD WITH THE NEW STAMPWORKS EXPERIMENT KIT

Parallax popular *StampWorks* Manual has been revised and is better than ever. The StampWorks manual includes 35 experiments based on the BASIC Stamp 2 microcontroller and the amazing

Professional Development Board.

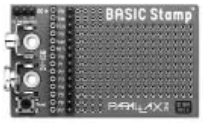
StampWorks gives you the hardware, electronic components and most important, the know-how to become a confident embedded programmer. Working your way through St*ampWorks* you will learn about efficient embedded design, connecting circuits and "smart" sensors to the BASIC Stamp, adding computer control to your projects and "Power PBASIC" programming techniques.

After you have become familiar with *StampWorks*, you will be able to control opto devices and displays, monitor switches, introduce sounds and sound effects to your projects, control lighting, servos and stepper motors, measure temp, voltage and much more. Finally, you will be confident in writing your own BASIC Stamp programs to control your proto-types, engineering designs or student projects by using a variety of circuits.

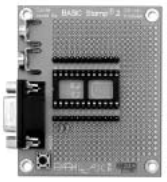
Part No.	Description	Price
32PX27297	StampWorks Experiment Kit	$286.00
32PX27220	StampWorks Manual	24.90

PARALLAX

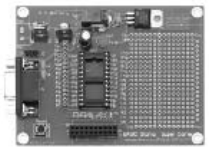
BASIC STAMP CARRIER BOARDS



27110



27120



27130

Makes it easier to program and prototype BASIC Stamp modules. Has prototyping area, 9V battery clips, reset button.

Model 27110: Supports BASIC Stamp 1, needs BS1 serial adapter ***(32PX27111)*** for programming.

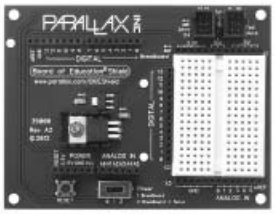
Model 27120: Supports BASIC Stamp 2

Model 27130: Super Carrier Board. Supports BS1 and all 24 pin BS2 modules.

Part No.	Description	Price
32PX27110	BASIC Stamp 1 Carrier Board	$4.95
32PX27120	BASIC Stamp 2 Carrier Board	15.50
32PX27130	Super Carrier Board	19.50

PARALLAX BOARD OF EDUCATION SHIELD

(for Arduino)



Plug the Board of Education Shield into your own Arduino for convenient breadboard prototyping and servo ports, with no soldering required. Arduino programmers who appreciate Parallax's breadboard-friendly sensors and accessories will find them even easier to use with this shield. Tested with the Ardunio Uno, Mega, and Duemilanove, the Board of Education Shield is designed to be physically compatible with any Ardunio Uno or Mega form-factor module. Use it with the Propeller ASC from MGH Designs for an inexpensive multicore development platform.

The Board of Education Shield is available alone, or conveniently packaged with the classic Boe-Bot chassis, servos, electronic components, and additional hardware in the Robotics Shield Kit.

Part No.	Description	Price
32PX35000	Board of Ed Shield	$31.45

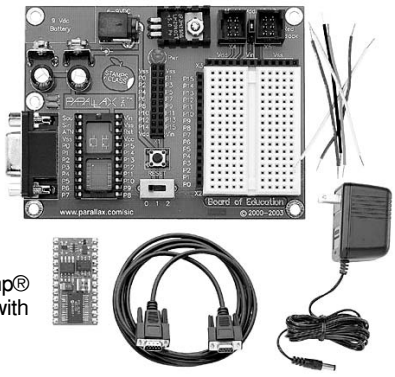
PARALLAX PROPELLER BOARD OF EDUCATION

The form of the original Board of Education meets the powerful function of the multicore Propeller microcontroller. A built-in set of peripherals makes it ready to support an amazing array of projects, prototypes, hands-on activities, and kits. The Propeller Board of Education is ideal for learning the basics of electronics, programming and robotics. It also simplifies advanced applications that require RF-linked communication, audio/ visual peripherals, and gigs of SD memory.

- Built-in Propeller microcontroller, 64 KB EEPROM and 5 MHz crystal oscillator.
- Breadboard, sockets for power and I/O access, and six servo ports with power-select jumpers for easy prototyping
- Automatically selects between USB and external power sources and provides USB over-current protection
- Onboard Mini stereo-audio jack, electret microphone, and VGA port for audio/visual projects
- Built-in MicroSD card and XBee wireless module sockets simplify advanced applications
- Dedicated analog header sockets provide three 10-bit inputs and two buffered variable-resolution outputs
- 2x20 header for connecting I/O pins to VGA, XBee, • Propeller clock and reset, USB serial flow control, and up to 10 LEDs
- Indicator lights for system power, servo power, eight color-coded VGA channels, two analog output level, XBee TX/RX, and USB TX/RX
- SEPIC 5 V switching regulator can deliver up to 3 A across the commercial temperature range
- Linear 3.3 V regulator can deliver up to 460 mA at room temperature

Part # 32PX32900 • Price: $127.95

BOARD OF EDUCATION® FULL KIT



Referred to as (BOE) the Board of Education® Full Kit is by far the most popular hardware kit purchased by educators. The BOE kit is a must as it is required hardware for all curriculum (Stamps in Class) offered by Parallax. As this is the fundamental platform for the Stamps in Class (SIC) series, or the base for your own experimentation, you will also need component parts or an SIC package with parts in addition to this essential base unit. The BOE is the main Parallax hardware package from which to build around and use the Stamps in Class (SIC) curriculum series. By adding What's a Microcontroller (WAM), Robotics, Applied Sensors or any other SIC package, you will have a great starting point to learn how the BASIC Stamp® functions.

Power Supply optional *(not included in basic package).*

Key BOE features:

- Lowest cost kit available with the BS2 module
- Necessary hardware to support Stamps in Class (SIC) curriculum
- Comes complete with main board, the BASIC Stamp® 2 (BS2-IC), serial cable, jumper wires, CD-Rom with software and documentation

BASIC Stamp Homework Boards (10 Pack)

It was designed to be a low cost BASIC Stamp 2 platform for take-home or dedicated projects. it is similar to **Board of Education** board except it does not have servo connections or a power supply jack.

Part No.	Description	Price
32PX910-28103	Full Kit with Stamp, Serial & USB Compatible	98.95
32PX28150	Full Kit w/o Stamp & Serial Cable	68.00
32PX28803	USB Version with Stamp & Cable	98.90
32PX28850	USB Version w/o Stamp & Cable	68.00
32PX28158	BASIC Stamp Homework Boards (10 Pak)	448.00
32PX7500009	Parallax 7.5V Power Supply Power Supply	8.95

ROBOTICS SHIELD KIT

(for Arduino)

Make your Arduino the onboard brain of a mobile robot and learn robotics, electronics, and programming with this versatile kit and its accompanying step-by-step lessons. The Board of Education Shield plugs into your own Arduino (not included) and mounts on the popular Boe-Bot robot chassis.

Key Features:

- Beginner-friendly - No programming experience needed
- Open platform - Exposed circuitry allows you to learn and create your own electronic circuits
- Solder-free - Experiment with custom circuits on the breadboard (no special-brand connectors needed)
- Understandable - Included text provides easy-to-follow tutorials
- Autonomous - Touch, light and infrared sensors let the Boe-Bot navigate on its own
- Expandable - Additional sensors and hardware expansion kits are available to get the most our of your robot

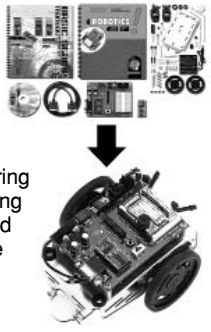
With this kit and your own Arduino module, you can follow the Robotics with the Board of Education Shield for Arduino lessons with over 40 hands-on activities.

Kit Contents:

- Board of Education Shield PCB
- High-quality aluminum robot chassis, continuous rotation servos, and wheels
- Boe-Boost Module
- All the electronic components and sensors needed for the Robotics activities
- All the assembly hardware needed (nuts, screws standoffs)
- Parallax Screwdriver

Part No.	Description	Price
32PX130-35000	Robotics Shield	$116.95

ROBOTICS: WITH THE BOE-BOT™ STAMPS IN CLASS CURRICULUM



The Boe-Bot™ is the most popular Parallax robotics kit because it appeals to both beginners and experienced robotics designers. The Board of Ed (BOE) programming board is necessary to use this product. When purchasing the Boe-Bot "full kit" version, the BOE programming board is included. The programming board is mounted on top of a sturdy chassis, providing an excellent base for wiring circuits. The breadboard portion of the programming board enables the designer to easily prototype and create different configurations and functions for the Boe-Bot™. The solderless breadboard makes it simple to switch the Boe-Bot from a light follower to an object avoider. Detailed programming instructions cover servo motors, PBASIC commands, sensors, frequency sweep programming and more.

Key BOE-BOT™ features:

- Explore autonomous robotics
- Multiple sensors allow detection of objects with infrared, follow or avoid light, and navigate with bumper wires
- Detailed text provides in-depth assembly and programming instructions
- Hours needed to complete: 40; Level of difficulty (1-10): 5
- Four AA Batteries (Required)

Part No.	Description	Price
32PX28132	Boe-Bot™ full kit complete with parts, text & BASIC Stamp hardware (Bd. of Ed kit) Serial Ver. plus USB adapter	$158.50
32PX28832	Boe-Bot™ full kit complete with parts, text & BASIC Stamp hardware (Bd. of Ed kit) USB Ver.	158.50

Note: *The Board of Education® (BOE) full kit is needed to use the following Boe-Bot™ products which are offered without BASIC Stamp® hardware.*

32PX28154	Boe-Bot™ parts and text	$88.00
32PX28124	Boe-Bot™ parts only	81.00
32PX28125	Boe-Bot™ text only	20.95
32PX28103	Full Kit with Stamp & Serial Cable w/o Power Supply (Serial)	97.95
32PX28803	USB Version with Stamp & Cable, w/o Power Supply	99.90

PARALLAX SENSORS

Fig. A Fig. B Fig. C Fig. D

These sensors will work with various stamp modules.

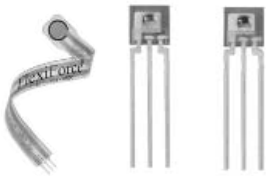
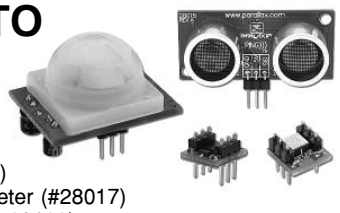


Fig. E Fig. F

Part No.	Description	Fig.	Price
32PX28018	Temperature and humidity sensor. 2 wire digital serial interface	A	42.95
32PX28130	Temperature probe. –25 C to 105 C. Output is 1mv/K. Ideal for submersing in liquids	B	14.50
32PX605-0004	Piezo Film Tab. used as vibration sensor, a flexible switch or a freq. response device.	C	1.95
32PX28015	PING Ultrasonic Sensor provides an easy way to measure distance	D	29.90
32PX30056	Force Sensor. 0V is no force, 4.2V is 100lbs Ideal output for A/D conversion	E	24.50
32PX604-00084	TSL235R Light to Frequency Converter	F	2.95
32PX605-00085	TSL237 Light to Frequency Converter	G	2.95

The TSL235R & TSL237 light-to-frequency converter combines a silicon photodiode and a current-to-frequency converter on a single monolithic CMOS integrated circuit. The output is a square wave (50% duty cycle) with frequency directly proportional to light intensity. Because it is TTL compatible, the output allows direct interface to a microcontroller or other logic circuitry.

PARALLAX INTRODUCTION TO SENSORS KIT



This kit includes one each of the following:

- PING))) Ultrasonic Sensor (#28015)
- Memsic 2125 Dual-axis Accelerometer (#28017)
- Hitachi HM55B Compass Module (#29123)
- PIR (Passive Infrared) Sensor (#555-28027)

Part No. 32PX29140 • Price: $78.95

PARALLAX BASIC ANALOG AND DIGITAL STAMPS IN CLASS CURRICULUM

Basic Analog and Digital is a 162-page tutorial that covers the essentials of 8-bit A/D and D/A conversion using a BASIC Stamp module. The text introduces PBASIC commands for A/D conversion with resistor / capacitor circuits, interfacing an ADC0831 8-bit A/D converter, scaling analog outputs into meaningful digital values, analyzing time-varying signals and using PWM as analog output. These concepts are conveyed using potentiometers, LEDs, speakers, photoresistors and buttons. The text was written by Andy Lindsay of Parallax.

*Board of Education Full Kit **(#28103)** is required to use this Stamps in Class text.*

Part No.	Description	Price
32PX28155	Parts and Text	$48.50

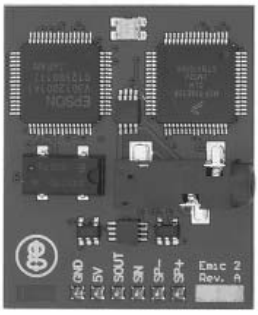
RASPBERRY PI WIRELESS INVENTORS KIT

The Wireless Inventors Kit for the Raspberry Pi (RasWIK) is an exciting and affordable addition to the Raspberry Pi. RasWIK demonstrates that with our leading edge technology anyone (and we mean anyone) can build wireless sensors and actuators, you do not need huge experience, a degree or even any tools. We show you even how to connect the devices you build to "the Internet of Things" (IoT) service providers such as Xively.

There are 29 fully documented projects. The 17 hardware projects take you from very basic sensors, actuators and light controls to more complicated ones that include measuring temperature and light levels. Out of the box all the hardware is configured to start you off without you writing a single line of code.

Part No. 01SS110110001 • Price: $96.90

PARALLAX TEXT-TO-SPEECH MODULE / EMIC 2



Give your project a voice! Designed in conjunction with Grand Idea Studio, the Emic 2 Text-to-Speech Module is a multi-language voice synthesizer that converts a stream of digital text into natural sounding speech. Its simple command-based interface makes it easy to integrate into any embedded system.

Features:

- High-quality speech synthesis for English and Spanish languages
- Nine pre-defined voice styles comprising male, female, and child

Application Ideas:

- Reading Internet-based data streams (such as e-mails or Twitter feeds)
- Conveying status or sensor results from robots, scientific equipment, or industrial machinery
- Language learning or speech aids for educational environments

Part No.	Description	Price
32PX30016	Text-to-speech module	$59.50

PARALLAX BASIC STAMP® DISCOVERY KIT

The ultimate combo to get started with BASIC Stamp programming. Includes everything but a PC and power supply. Contains the BASIC Stamp 2 module, Board of Education carrier board and the *What's a Microcontroller? (WAM?)* parts and text. The Discovery Kit ships with an "everything-you-need" components package that includes jumper wires, handy tact switches, LED's, a servo motor, sensors, passives, IC's and more. Gets you building projects upon opening the box. Perfect place to start for either an engineer or anyone getting into the world of embedded systems. Enables user to program the BASIC Stamp 2, build 40+ hands-on activities, learn to write your own PBASIC programs and solve real world engineering problems with a microcontroller.

Part No.	Description	Price
32PX27807	USB Version Discovery Kit	159.00
32PX7500009	Power Supply	9.95

PARALLAX BASIC STAMP 1 STARTER KIT

Includes BS1-IC module, BASIC Stamp manual, Super Carrier Board, CD ROM, BS1 Serial Adapter and serial cable. *Power supply not included.*

Part No. 32PX27205 • Price: $58.95

PARALLAX BASIC STAMP® ACTIVITY KIT

It teaches the fundamentals of BASIC stamp microcontrollers and programming or robotics. Simple experiments use motion, light and sound. Each chapter closes with instructions for building a simple project. **Includes:** BASIC Stamp Kit, BASIC Stamp 2 microcontroller, parts and PCB. Serial interface cable, software CD and instruction guide.

Part No. 32PX90005 • Price $98.50

PARALLAX WHAT'S A MICROCONTROLLER? (WAM) STAMPS IN CLASS CURRICULUM

This is a prerequisite For All "Stamps in Class" Curriculum

The number one starting point for using the BASIC Stamp 2 (either the Board of Education® (BOE) full kit, or the HomeWork Board is needed to use What's a Microcontroller? Over 40 hands-on activities with complete PBASIC 2.5 support. What's a Microcontroller? (WAM) answers the question of how to design customized, intelligent inventions using the BASIC Stamp® 2. Activities using motion, light, sound and tactile feedback introduce the user to basic principles in programming, electronics, math and physics. Program circuits for light, sound and motor control. Over 40 hands-on activities including reaction timer game, potentiometer-controlled servo, 7-segment LED light meter, Nokia Cell Phone ringtone player and more. Write and download PBASIC code to a BASIC Stamp®, build circuits on the breadboard and implement them with components which include: LED's, 7-Segment display, pushbuttons and a servo.

KEY WAM FEATURES:

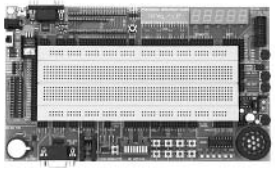
- Most popular starting point for everyone using the Board of Ed (BOE) programming board and BASIC Stamp® module
- Program circuits for light, sound and motor control
- Over 40 hands-on activities with complete PBASIC 2.5 support
- Hours needed to complete: 40
- Level of difficulty (1-10): 3

Part No.	Description	Price
32PX28152	WAM parts and text	$68.95
32PX28122	WAM parts only	45.00
32PX28123	WAM text only	25.00

Note: *The Board of Education® (BOE) full kit is needed to use the above products.*

32PX28103	Full Kit with Stamp & Serial Cable W/O Power Supply	$97.95

PARALLAX PROFESSIONAL DEVELOPMENT BOARD



High quality, fully integrated platform for Basic Javelin and Ubicom Stamp®. A wide variety of typical I/O (LED's, LCD interface, button, etc.) are built in. Three sockets allow the accommodation of BSI-IC, 24 or 40 pin Basic Stamp, 24 pin Javelin Stamp modules as well as Sx28 AC/DP microcontroller with an SX-Key. Other features: 16 discrete blue LEDs, five blue 7 segment displays, L293D high current driver, pulse generator (1Hz, 10, 100 or 1KHz), RJ11 connector, RS-232 DCE part. The USB cable (mini B), power supply and serial cable are not included but available separately.

Part No.	Description	Price
03PX28138	Professional Dev. Board	$157.95
04580500006	USB A to mini B Cable	6.95
16D75000007	12V DC Supply @ 1A	14.00

PARALLAX COMPASS MODULE GYROSCOPE MODULE

The Compass Module 3-Axis HMC5883L is designed for low-field magnetic sensing with a digital interface. This compact sensor fits into small projects such as UAVs and robot navigation systems. The sensor converts any magnetic field to a differential voltage output on 3 axes. This voltage shift is the raw digital output value, which can then be used to calculate headings or sense magnetic fields coming from different directions. Example code in PBASIC, Spin, and C are provided in the Downloads.

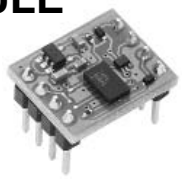
Features:
- Measures Earth's magnetic fields
- 3-axis magnetoresistive sensor
- Wide magnetic field range (+/-8 gauss)
- 1 to 2 degree compass heading accuracy
- Precision in-axis sensitivity and linearity
- I²C digital Interface
- Fast 160 Hz maximum output rate
- Designed for use with a large variety of microcontrollers with different voltage requirements

Application Notes:
- Auto and personal navigation
- UAV systems
- Robotic navigation
- Location-based services (LBS)

Key Specifications:
- Power Requirements: 2.7 to 6.5 VDC
- Communication Interface: I²C (up to 400 kHz)
- Operating temperature: -22 to +185 F (-30 to +85 C)
- Dimensions: 0.725 x 0.650 in (1.8 x 1.7 cm)

Part No. 32PX29133 • Price: $28.95

PARALLAX 3-AXIS ACCELEROMETER MODULE



The Freescale Semiconductor MMA7455L 3-Axis Digital Output Accelerometer is a low power, micro machined sensor capable of measuring acceleration along its X, Y, and Z axes. It offers several convenient integrated features including an analog to digital converter (ADC), digital low-pass filter, and selectable sensitivity ranges of 2g, 4g, or 8g. This device can be easily configured to detect quick motion pulses as single taps, double taps, and 0g (free fall) conditions on any or all axes and provides configurable interrupt pins (INT1 and INT2) for each type of event

- Wide supply voltage compatibility range.
- Selectable sensitivity: 8-bit mode (2g/ 4g/ 8g) or 10-bit mode (8g).
- User settable registers to calibrate each axis.
- On-board voltage regulators and I/O level shifters for added convenience.
- Compact, breadboard-friendly package: 0.5 inch x 0.6 inch (12.7 mm x 15.2 mm).
- Operating Voltage: 2.5V – 5.5V.
- Operating Current: 26 A typ. in standby mode; <3 mA full operation while transmitting data.

Part No. 32PX28526 • Price: $34.90

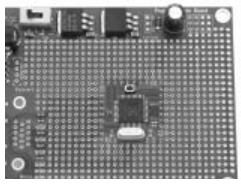
PARALLAX USB TO 232 SERIAL ADAPTER WITH CABLE

This works with all Parallax products. Plug into USB port and then point the operating system to appropriate driver. Then add driver port to your BASIC Stamp Module and you are ready to program with a virtual COM port.

Part No. 32PX28031 • Price: $16.90

PARALLAX PROPELLER PROTO BOARD

Parallax's Propeller Proto Board is a low cost, high quality solution for permanent projects using the Propeller chip. To save the user some expense, the USB programming interface is not included on the Propeller Proto Board; we suggest you purchase a Propstick for programming your Propeller Proto Boards. This board is also ready for use with the Prop Clip, and is also compatible with the USB2SER with the addition of a 4-pin header (not included).



- P8X32A-Q44 Propeller chip
- 64 KB EEPROM for program and data storage
- LM1086 5V and 3.3V regulators provide up to 1.5 Amps with an input power supply of 6-9 VDC
- Accepts the optional VGA, mouse and keyboard interface available in the Accessory Kit
- Three-position power switch (off, logic power, power to logic and servo ports)
- Sockets for 4 servos
- Removable 5MHz crystal
- Access to all 32 I/O pins
- Large amount of prototyping area
- Unplated row of holes along perimeter to provide stress relief to off-board connections
- Same mounting holes as the Board of Education (3" x 4") for compatibility with the Boe-Bot® robot

Part No. 32PX32212 • Price $24.50

PARALLAX GYROSCOPE MODULE 3-AXIS L3G4200D

The Gyroscope Module is a low power 3-axis angular rate sensor featuring temperature data as an added bonus. Raw measured angular rate and temperature data are accessed from the selectable digital interface (I2C or SPI). The module features a small package design and has an easy to access SIP interface with a mounting hole for quick connectivity to your projects. It is designed for use with a large variety of microcontrollers with different voltage requirements.

Features:
- 3-Axis angular rate sensor (yaw, pitch, and roll)
- Supports I2C and SPI communications
- Three selectable scales: 250/500/2000 degrees/sec (dps)
- High shock survivability
- Embedded temperature sensor -40 to +185 F (-40 to + 85 C)
- Embedded power-down and sleep mode
- 16 bit-rate value data output
- 8-bit temperature data output

Application Ideas:
- Gaming
- 3D motion control
- Virtual reality input devices
- Robotics
- UAV, IMU systems

Key Specifications:
- Power Requirements: 2.7 to 6.5 VDC
- Communication Interface: I2C (up to 400 kHz) or SPI (10 MHz; 4 & 3 wire)
- Operating temperature: -40 to +185 F (-40 to +85 C)
- Dimensions: 0.85 X 0.80 in (2.16 X 2.03 cm)

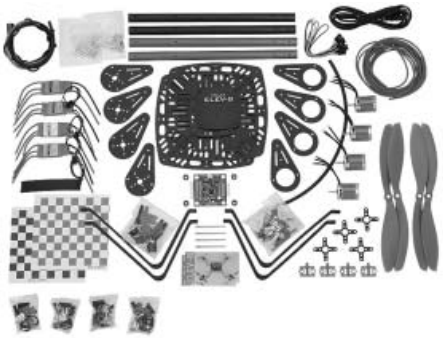
Part No. 32PX27911 • Price: $29.99

ELEV-8 QUADCOPTER

The ELEV-8 Quadcopter is a flying robotic platform that is lifted and propelled by four fixed rotors. There are no fixed wings; all of the lift is created from the rotors. Unlike standard helicopters a quadcopter uses fixed-pitch blades, whose rotor pitch does not vary as the blades rotate; control of vehicle motion is achieved by varying the relative speed of each rotor to change the thrust and torque produced by each.

The quadcopter uses a HoverFly board with a Propeller multicore microprocessor to electronically control stabilization of the aircraft. The benefits to this system are a stable platform, with no mechanical linkages for a small maneuverable and agile aircraft.

The kit provides an inexpensive way to get involved in the quadcopter arena. The kit includes; frame, mounting hardware, motors, speed controllers, propellers and the control board for flight stabilization. (the only thing you need to provide is the RC radio equipment, battery). We recommend a six channel RC radio.



- Open under body for camera mounting options
- Open Source; design files available online
- Highly modifiable, for custom additions
- Modular frame for fast repair
- Protective motor mounts
- Can fly with added payloads up to 2 lbs

Part # 32PX80000 • Price: $595.00

SumoBot ROBOT – *27400*

The SumoBot robot is a competition-ready robot designed within the Northwest Robot Mini-Sumo Tournament rules. This little pusher will locate and knock its opponent right out of the ring while detecting the outside circle should an escape move be necessary.

The electronics consists of a surface-mounted BASIC Stamp 2 module and infrared sensors to detect your opponent and the edge of the Sumo Ring. The hardware package includes the black anodized aluminum chassis and scoop, servo motors, wheels, 4AA power pack *(batteries not included)* mounting standoffs and screws. The documentation takes you from basic moves to one-on-one combat. The general topics introduced in the SumoBot Manual are as follows:

- Basic SumoBot locomotion under program control
- Edge avoidance and opponent detection based on a variety of sensor inputs
- Navigation opponent seeking using programmed artificial intelligence

SumoBot ROBOT COMPETITION KIT – *27402*

Build and program **two high-quality robots kits** designed to wrestle in the mini-sumo competition ring *(included in kit)*. Besides components and boards to build two SumoBot robots, it includes SumoBot manual, *Applied Robotics with SumoBot Stamps in Class* text, serial programming cable, competition ring poster, screwdriver, 8 AA batteries required (*not included)*. For programming, it requires a PC running Windows 98/2000/XP with available serial port or USB port with USB-to-serial adapter.

Part No.	Description	Price
32PX27400	SumoBot Robot Kit w/Manual – Serial / USB	$158.90
32PX27402	SumoBot Robot Competition Kit **W/Two Robots**, Applied Robotic Text, Competition Poster – Serial / USB	218.95
32PX27403	Applied Robotics, Stamp in Class Curr. Text Only	28.50
32PX27404	Competition Ring Poster	14.50
32PX555-27400	SumoBot PCB with BASIC Stamp 2 Module	98.50
32PX122-27400	SumoBot Manual	24.90

SCRIBBLER 2 ROBOT

WITH USB CABLE & ADAPTER

The S2 robot is suitable for a whole variety of programming skills. The Scribbler robot arrives pre-programmed with eight demo modes, including light-seeking, object detection, object avoidance, line-following, and art. Place a Sharpie marker in the pen port and it will scribble as it drives. Through the use of third-party tools you can also program the S2 on a Mac or under Linux, in PropBASIC and C.

- 3 light sensors
- 2 obstacle avoidance sensors
- 2 line following sensors
- 2 independent DC wheel motors
- Wheel encoders for precise maneuvers
- Stall sensor for wheel motors
- Pen port for drawing on paper

Part No.	Description	Price
32PX28336	Scribbler 2 Robot with USB adaptor and cable	$138.95

APPLIED ROBOTICS WITH SumoBot STAMPS IN CLASS CURRICULUM

Written specifically for the SumoBot Robot Competition Kit. This 260-page Stamps In Class text shows you how to test and refine your SumoBot robot's performance in the mini-Sumo wrestling competition ring as you refine your robotics skills.
Activities include friction analysis with free-body diagrams, sensor subsystem testing, self-calibrating sensors, memory optimazation with multi-purpose variables and a sensors flag register, and state-machine diagrams for sensor-based navigation. EEPROM data logging lets you record you robot's sensor and program states during a match, then display them afterward in the BASIC Stamp Editors Debug Terminal – an excellent way to troubleshoot and analyze the performance of your program strategies.

Part No.	Description	Price
32PX27403	Text Only	$28.50

PARALLAX 5 AA BATTERY HOLDER

This battery holder accepts 5 AA cells. It is designed to mount inside our rectangular brushed-aluminum chassis used with the Boe-Bot and BOE Shield-Bot robots.
• 2.1 mm center-positive barrel plug

Part No.	Description	Price
32PX753-00007	5 AA Battery Holder	$2.95

BASIC KIT FOR ARDUINO

The Arduino Sidekick Basic Kit is designed to be used with your Arduino / Seeeduino / Seeeduino ADK / Maple Lilypad or any MCU board. It contains everything needed for a first-time user to connect his/her computer to an Arduino.

It includes many of the most popular accessories for DIY projects : like Breadboard, Jumper wires, Color LEDs, Resistors, Buzzer, etc. All of these coming with its own handy box are easy transport and minimal clutter.

Part No. 32SS815011001 • Price: $19.90

PARALLAX

RF TRANSCEIVER

This provides an easy, low cost method of sending data to a PC from 500' line of sight

Part No. 32PX27982 • Price: $39.25

PARALLAX

RFID READER MODULE

Low cost solution to read passive RFID transponder tags from up to 4 inches away.

Part No.	Description	Price
32PX28140	RFID Reader Module	$39.50
32PX32390	RFID Reader with Tag Sampler Kit	42.95
32PX28141	Rectangle Tab 54mm x 85mm	2.75
32PX28142	Round Tag 50mm	2.75

PARALLAX BASIC STAMP-2 MODULES

These are small microcontrollers with 8 or 16 I/O lines that can be easily interfaced with many devices. All serial interface.

Operating Voltage:
5–15V DC

Operating Temperature:
0 to 70 C

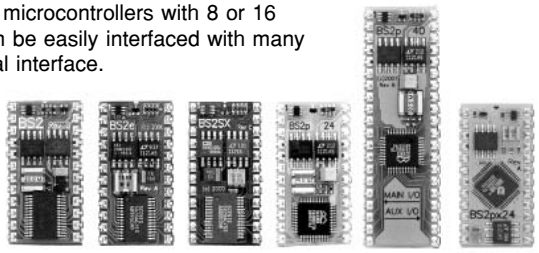


Fig. A Fig. B Fig. C Fig. D Fig.E Fig. F

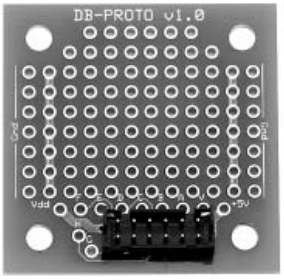
Part No.	Fig.	Package	Microcontroller	EEPROM Size	Speed MHz	I/O	Price
32PXBS2IC	A	DIP-24	PIC16C57	2K	20	16	$48.50
32PXBS2EIC	B	DIP-24	Scenix SX28AC	8 x 2K	20	16	53.50
32PXBS2SXIC	C	DIP-24	Scenix 28AC	8 x 2K	50	16	58.50
32PXBS2P24	D	DIP-24	Scenix 48AC	8 x 2K	20 Turbo	16	78.50
32PXBS2P40	E	DIP-40	Scenix 48AC	8 x 2K	20 Turbo	32	88.25
32PXBS2PXIC	F	DIP-24	Scenix 48AC	8 x 2K	32 Turbo	16	78.50

PARALLAX GYROSCOPE MODULE-3AXIS

The Gyroscope Module is a low power 3-axis angular rate sensor featuring temperature data as an added bonus. Raw measured angular rate and temperature data are accessed from the selectable digital interface (I2C or SPI). The module features a small package design and has an easy to access SIP interface with a mounting hole for quick connectivity to your projects. It is designed for use with a large variety of microcontrollers with different voltage requirements.

Part No. 32PX27911 • Price $29.95

PARALLAX BS2PE PROTOTYPING DAUGHTERBOARD



Parallax's BASIC Stamp 2pe Proto-DB Prototyping Daughterboard is a convenient through-hole board that allows you to build your own circuits with the MoBoStamp-pe and /or the MoBoProp motherboards.

- Size: 1 3/8" X 1 3/8" (35mm x 35mm)
- Plug-compatible with Parallax motherboards.
- Ground plane for quiet operation.
- 70 uncommitted plated through-holes on a 0.1" grid for your components.
- 14 grounded through-holes.
- 7 plated through-holes each in two uncommitted voltage busses.
- 11 connecting pads for daughterboard connector supply lines and signals

Part No. 32PX28310 • Price $2.95

UNDERSTANDING SIGNALS WITH PROPSCOPE PARTS & TEXT

INCLUDES PC BASED USB OSCILLOSCOPE & COMPONENTS FOR BREADBOARDING

Includes PropScope (PC based USB O'scope), components applicable to breadboarding circuits and a printed text that guides step-by-step from basics through advanced measurement techniques. Circuits and measurement examples are widely used standards in industry and research, today. This kit is an excellent resource for science, technology, engineering and math (STEM) programs. Begins with an overview of the PropScope's electronic test-bench tools.

- DC Voltmeter - measures voltage levels
- Oscilloscope
- Logic Analyzer Spectrum Analyzer Function generator
- Components include: LED's, switches, IR device, phototransistor, potentiometer, op amp and A/D converter IC's, resistors, caps and jumper wires.

Note: The Board of Ed and BASIC Stamp 2, or BASIC Stamp HomeWork Board (sold separately) required to use PropScope.

Part # 32PX32225 • Price: $225.95

PROPELLER EDUCATION KIT

A complete kit with everything you'll need to get started with the Propeller microcontroller and educational labs from Parallax, except a 9V battery. Download the free Propeller Education Lessons and Labs that utilize the parts in this kit, with new ones released frequently. Note: The Propeller Education Series is designed for those with previous microcontroller programming and electronics experience.if you are new to programming and electronics, we recommend the BASIC Stamp Activity Kit.

Propeller Education Kit contents:

- The Propeller DIP Plus Kit – A Propeller microcontroller "plus" all the electronic components and connectors for a fully functional system on a breadboard.
- Prop Plug – A USB to serial programming and communication tool. In addition to quick Propeller program downloads, it supports bidirectional Propeller-PC communication at up to 3 Mbps.
- PE Kit Project Parts – All the parts you'll need to work through the Startup and Fundamentals labs in the Propeller Education series, chosen with students' needs and budget in mind.
- Interconnecting Breadboards – 3 breadboards and 4 power rails interconnect and provide plenty of space to build the PE Platform and projects. With the Propeller and system electronics in the middle of the PE Platform, project circuits can fan out from I/O pins to breadboards on either side and terminate at the outer power rails.

Part No. 32PX32305 • Price $99.95

BASIC ANALOG AND DIGITAL STAMPS IN CLASS CURRICULUM

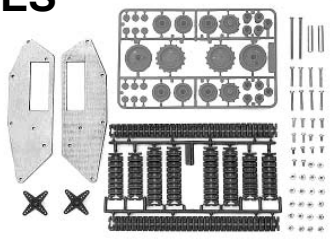
Basic Analog and Digital is a 162-page tutorial that covers the essentials of 8-bit A/D and D/A conversion using a BASIC Stamp module. The text introduces PBASIC commands for A/D conversion with resistor / capacitor circuits, interfacing an ADC0831 8-bit A/D converter, scaling analog outputs into meaningful digital values, analyzing time-varying signals and using PWM as analog output. These concepts are conveyed using potentiometers, LEDs, speakers, photoresistors and buttons. The text was written by Andy Lindsay of Parallax.

*Board of Education Full Kit **(#28103)** is required to use this Stamps in Class text.*

Part No.	Description	Price
32PX28155	Parts and Text	$48.50

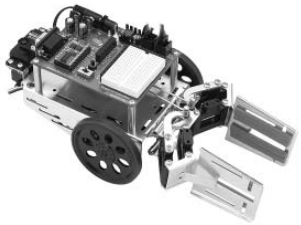
BOE-BOT ADD-ONS AND ACCESSORIES

TANK TREAD KIT



Turn your Boe-Bot into a tank. Simply remove the wheels from your Boe-Bot robot and attach the gears and tread. The parts lists includes printed documentation.

GRIPPER KIT



This kit adds pick-up and carry capability to your Boe-Bot robot. It features parallel plates that open, clamp onto and lift objects all with one cleverly utilizd Parallax standard servo.

Part No.	Description	Price
32PX28106	Tank Tread Kit	34.90
32PX28202	Gripper Kit	53.95

PROPELLER STARTER KIT

Everything you need to get started with Propeller microcontroller, including Demo Board, manual, software and USB cable. it interfaces easily to devices such as mouse, keyboard, TV or VGA monitor and speaker. In just a few minutes, you can see some of the impressive taskes Propeller can perform.

Part No. 32PX32300 • Price: $99.50

PARALLAX IR REMOTE FOR BOE-BOT STAMPS IN CLASS CURRICULUM

This 175 page text focuses on adding infrared communication and control to the Boe-Bot robot. With this text, you'll learn how to directly control the Boe-Bot game-controller style, remotely set roaming speed and distance, combine remote control and autonomous roaming functions, and remotely select autonomous roaming modes. New programming techniques introduce designing user interfaces and menu systems. The final project makes the BASIC Stamp an IR remote command sequence interpreter for a remotely programmable Boe-Bot.

Note: *To complete all activities, you will need a fully assembled Boe-Bot with electronic components from the kit and a universal programmable remote control that supports a Sony TV.*

Part No.	Description	Price
32PX28139	Parts Kit and Book	$34.50
32PX29122	Parts Kit Only	12.50

PARALLAX SMART CARD READER

The Smart Card Reader provides a low-cost solution for reading and writing data to contact memory-based smart cards and is compatible with both the BASIC Stamp® and Propeller™ microcontrollers. Today, smart cards are used in a wide variety of applications from healthcare to personal finance. Our Smart Card Reader can be used with the compatible Smart Cards listed below for a variety of applications such as security systems, data storage, tracking systems, and identity authentication.

- Low-cost solution for reading and writing data on standard smart cards
- Compatible with most memory-based smart cards (not compatible with microprocessor-based smart cards)
- Card detect switch allows confirmation of smart card insertion
- Dual-row SIP header for breadboard stability and easy prototyping
- Easy interface to both the BASIC Stamp and Propeller microcontrollers
- **Power requirements:** 2.7 - 5.5 VDC
- **Communication:** Dependent on protocol of smart card used
- **Dimensions:** 2.95 x 2.05 in (7.5 x 5.2 cm)

Part No. 32PX32320 • Price: $9.95

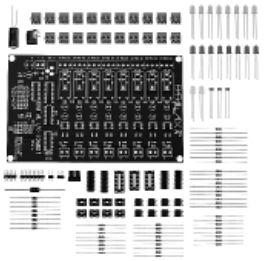
PARALLAX SMART CARD

Smart Cards are the size of a standard credit card. The pins are accessible through the gold plated contact pads embedded in the card. When paired with the Smart Card Reader (#32320) connected to the I/O pins of a BASIC Stamp, Propeller, or other microcontroller, the Smart Card can be used for data storage, security systems, tracking systems, or identity authenitication.

- 1,000,000 erase/write cycles guaranteed with 10 year data retention
- Memory Organization: 256 x 8-bit, and 2048 x 8 bits, in eight 16-byte pages (*#32322*)
- 2.5 ms write time, and 5 ms max write time with auto clear (*#32322* and *32323*)
- 3-byte Programmable Security Code for memory write/erase protection *(#32321)*
- 3-bit error counter *(#32321)*
- **Power requirements:** 2.7-5 VDC; 3 mA typical active current
- **Communication:** I2C (CMOS)
- **Dimensions:** 2.5 x 3 in (6.35 x 7.62 cm)

Part No.	Price	Part No.	Price
32PX32321	$0.98	32PX32323	0.98
32PX32322	1.28		

PARALLAX DIGITAL I/O BOARD KIT



I/O Board Kit enables your microcontroller to interface to high voltage circuits allowing you to read up to 8 optically isolated inputs and control up to 8 isolated outputs. Inputs can be a voltage from 5-30VDC (AC compatible) and outputs can be either mechanical or solid state relays that can switch up to 12A loads, such as cooling fans, solenoids, heating elements and more. Simple parallel input/output control for ease of use or you can use the serial interface to minimize I/O pin usage. The logic circuits operate from 3.3V to 5V making them compatible with most microcontrollers. The ICs in the kit are all socketed making replacement easy should it ever be necessary. 8 green and 8 red LEDs indicate the status of input and outputs. 2 yellow LEDs indicate relay/logic power. Inputs can be configured to handle a different range of input voltages. ***This kit does not include Omron 12A SPDT or Sharp 8A Solid State Relays, they must be purchased separately. This kit requires relays to operate. Soldering equipment and experience is required for assembly.***

- Mechanical or Solid State Relay output
- Configurable Input Voltage range
- Serial or parallel interface to inputs/outputs
- LED indication of power and input/output status
- AppMod compatible connection for Board of Education
- Power requirements: 12VDC @ 1A for relay power and 3.3 – 5VDC for logic power
- Communication: Parallel or Synchronous Serial

Part No.	Description	Price
32PX27113	Digital I/O Kit	$49.90
32PX400-00052	12A Relay SPDT	1.95
32PX400-00053	8A Solid State Relay	5.55

PARALLAX

GPS RECEIVER W/CABLE

With the PMB-248 GPS Receiver you can track up to 12 satellites to pinpoint your location on the globe. With TTL and RS-232 level outputs you can connect this receiver to any microcontroller or your PC. Small size and low power consumption make this GPS receiver a great choice for robotics, vehicle tracking, fleet management and auto pilot as well as for navigation systems.

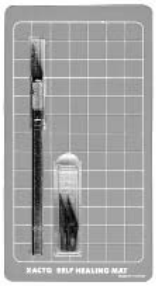
- Built-in rechargeable battery for memory and RTC backup
- Supports NMEA0183 V2.2 data protocol
- Includes cable for power, TTL and RS-232 connections

Specifications:

- **Power requirements:** 3.3V - 5V DC @ ~80mA
- **Communication:** TTL or RS-232 asynchronous serial @ 4800 bps
- **Dimensions:** 1.25 x 1.25 x .35 in (32 x 32 x 9 mm)
- **Operating Temp Range:** -40 to +158 F (-40 to +70 C)

Part No. 32PX28500 • Price: $34.50

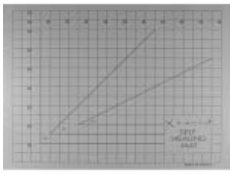
X-ACTO®
CUTTING SET WITH SELF HEALING MAT



Includes X-acto #1 knife with cap, self healing cutting mat (4" x 7 1/4") and (5) #11 blades. Self healing mat contructed of special material. Protects table tops from cuts and nicks.

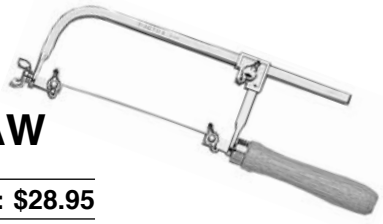
Part No.	Price
03X7768	$8.50

X-ACTO®
SELF HEALING MATS



Part No.	Description	Price
03X7760	9" x 12"	$9.95
03X7761	12" x 18"	17.95
03X7762	18" x 24"	26.95
03X7763	24" x 36"	48.95

X-ACTO®
ADJUSTABLE JEWELER'S SAW



Part No. 03X7043 • Price: $28.95

X-ACTO® SMALL METAL MITRE BOX SET

Part No. 03X75320 • Price: $14.90

X-ACTO® PRECISION RAZOR SAW SET

Part No. 03X75300 • Price: $7.95

X-ACTO®
PRECISION COMPASS & SWIVEL KNIFE

Part No. 03X7753 • Price $11.75

KNIFE SET
13 PC.

Two quality knives in a deluxe case plus 8 assorted blades.

Part No.	1-9	10+
03RD73893	$10.95	$9.95

DELUXE KNIFE SET
26 PC.

Four quality knives in a deluxe case with 17 assorted blades.

Part No.	1-9	10+
03RD73894	$28.95	$27.95

X-ACTO®
BOARD CUTTER

- Cuts foam board, mat board, and illustration board
- Easily cuts foam board, cardboard, and mats
- Cuts both 90 and 45 angles up to 9/16" deep

Part No. 03X7747 • Price $12.95

X-ACTO®
ERGO UTILITY KNIFE

Ergonomic handle shape with adjustable push-button slide for depth select and full blade retraction

Part No. 03X3276 • Price $7.25

X-ACTO®
NO. 1 PRECISION KNIFE

Part No.	Description	Price
03X3201	Carded	$2.10
03X3601	Safety Cap, Carded	2.40
03X3311	With (5) #11 Blades, Carded	3.90
03X5211	With (5) Assorted Bladed, Carded	3.55

RSR

BREADBOARDS / SOLDERLESS

Ideal for testing, prototyping and experimentation. Aluminum backing. Binding Posts. Nickel plated clips.

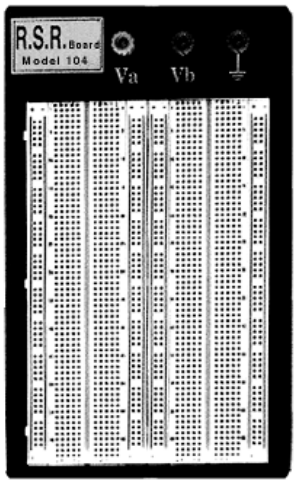


Fig. H

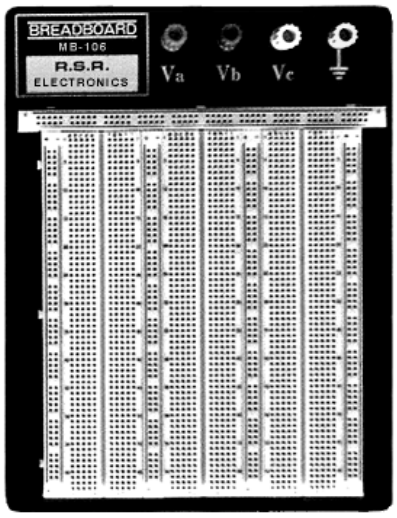


Fig. I

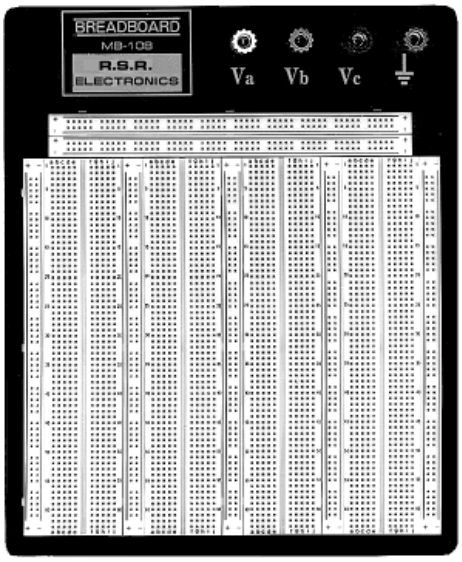


Fig. J

Part No.	Wire Kit*	Terminal Strips	Bus Strips	Fig.	Binding Posts	Contact Points	Size	1-9	10+
03MB104	—	2	4	H	3	1,660	8.7” x 5.9”	$13.50	$12.50
03MB104WWK *	Yes	2	4	H	3	1,660	8.7” x 5.9”	16.50	15.50
03MB106	—	3	5	I	4	2,390	9.4” x 7.7”	16.95	16.25
03MB106WWK *	Yes	3	5	I	4	2,390	9.4” x 7.7”	18.90	17.90
03MB107WWK *(Plastic Base)*	Yes	3	5	I	4	2,390	9.4" x 7.7"	22.75	21.50
03MB108	—	4	7	J	4	3,220	10.2” x 9.4”	24.95	22.95
03MB108WWK*	Yes	4	7	J	4	3,220	10.2” x 9.4”	26.95	24.95

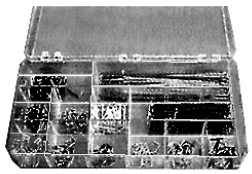
**** 140 Pc. Wire Kit***

RSR

JUMPER WIRE KITS FOR BREADBOARDING

350 PIECES:

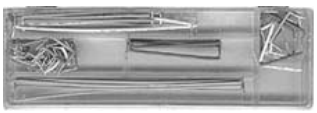
22 AWG pre-stripped and pre-formed solid wire jumpers. 25 pieces each of lengths from 0.1" to 5.0". 14 different sizes, 13 different colors. Includes sturdy 10½" x 4¾" plastic case.



Part No.	1-9	10+
2700WJW60B	$10.95	$10.50

140 PIECES:

22 AWG solid wire jumpers in a small plastic case. 140 pieces in assorted lengths and colors.



Part No.	1-9	10+
2700MJW70	$3.90	$3.80

RSR

JUMPER WIRE KIT DELUXE MODEL

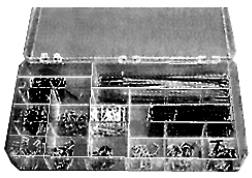
TOTAL OF 380 WIRES

INCLUDES 30 REINFORCED JUMPER WIRES —

Reinforced Pin Ends
For Use with Breadboard

Contains all the standard jumpers as in Model # 2700WJW60B ***PLUS*** the following **reinforced jumpers** — 10 pieces each of 2", 4", and 6" reinforced jumpers (5 different colors). **30 reinforced jumpers** plus 350 standard.

30 Reinforced Jumper Wires



Part No.	1-9	10+
2700RJW90	$16.95	$15.95

RSR BREADBOARDS / SOLDERLESS

Ideal for testing, prototyping and experimentation. Aluminum backing. Binding Posts. Nickel plated clips.

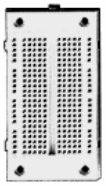


Fig. A

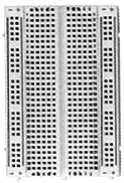


Fig. B

Fig. C

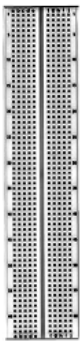


Fig. D

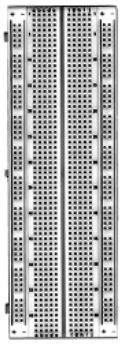


Fig. E

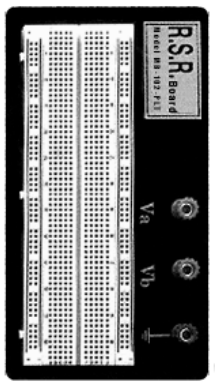


Fig. F

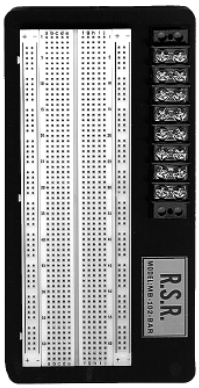


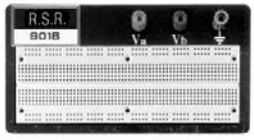
Fig. G

Part No.	Wire Kit**	Terminal Strips	Bus Strips	Fig.	Binding Posts	Contact Points	Size	1-9	10+
03MB101	—	1	2	A	–	270	3.3” x 1.8”	$2.70	$2.50
03MB801	—	1	2	B	–	400	3.3" x 2.1"	3.25	2.90
03MBD	—	0	1	C	–	100	6.5” x 0.3”	1.80	1.50
03MBT	—	1	0	D	–	630	6.5” x 1.4”	2.60	2.40
03MB102	—	1	2	E	–	830	6.5” x 2.1”	4.75	4.25
03MB102WWK **	Yes	1	2	E	–	830	6.5” x 2.1”	7.95	7.25
03MB102PLT	—	1	2	F	3	830	7.2” x 3.8”	7.90	6.90
03MB102PLTWWK**	Yes	1	2	F	3	830	7.2” x 3.8”	8.95	8.50
03MB102BAR	—	1	2	G	Terminal Strip 8 Pos.	830	7.2” x 3.8”	9.95	8.95

**** 70 Pc Wire Kit***

RSR BREADBOARDS

- ABS plastic
- Spring clip contact: Phosphor bronze
- Square holes / 840 tie points
- 165 x 56 x 8.5 mm

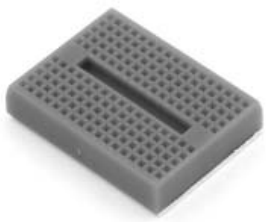


03MB901PLT

Part No.	Description	1-9	10+
03MB901	Breadboard Only	$5.75	$5.50
03MB901PLT	Breadboard with Metal Plate	8.95	7.95

MINI BREADBOARD

- Measures 1.8" x 1.4" (170 tie points)
- Ideal for robotic or Arduino projects
- Available in Green, Blue, and White



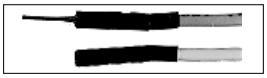
Part No.	Description	Price
03MB701GR	Green	$3.50
03MB701WH	White	3.50
03MB701BL	Blue	3.50

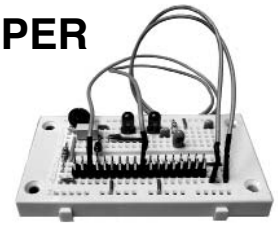
HOOK-UP WIRE KIT

- Six 22Ga wire spools, 25 ft. each
- Assorted colors
- Spools contained in dispensing box, which keeps hook-up wire neat and clean

Part No.	Description	Price
27WK22SLD25	Solid Wire Kit	$11.95
27WK22STR25	Stranded Wire Kit	14.50
27WK22SLD10	10 Spools, Solid Wire Kit	19.50
27WK22STR10	10 Spools, Stranded Wire Kit	23.50

REINFORCED JUMPER WIRE KITS





Part No.	Description	Price
2700MF1	Male to Female *Set of 10 (12")*	$4.95
2700WK1	Male to Male *Set of 30 (3 to 7")*	9.50
2700FF2	Female to Female *Set of 5 (12")*	3.25

REINFORCED JUMPER WIRE KITS

MALE TO MALE

Part No.	Description	Price
2700WK10	2" long, 10 pc set, brown color	$3.20
2700WK20	2.8" long, 10 pc set, gray color	3.30
2700WK30	4" long, 10 pc set, orange color	3.50
2700WK40	6" long, 10 pc set, purple color	3.65
2700WK50	8" long, 10 pc set, blue color	3.80
2700WK60	50 pc set, sizes 2" to 8"; colors brown, gray, orange, purple, blue	15.90
2700WK100	30 pc set, sized 3" to 7"; colors red, black, white, yellow, blue	9.50

PROTOTYPING / BREADBOARD

RSR HOOK UP WIRE KIT

- 22Ga Wire Spools, 25' ea
- 10 Spools of assorted colors
- Spools in dispensing box which keeps it neat and clean

Part No.	Description	Price
27WK22SLD10	10 Spools, Solid Wire Kit	$19.50
27WK22STR10	10 Spools, Stranded Wire Kit	23.50

BREADBOARDING PIN

Ideal for repeated breadboard use. Pin will accept 22 or 24 ga wire which can be crimped.

Part No.	1-9	10-99	100+
03BBPINS	$ 0.11	$0.10	$0.09

CONTACT POINT BLOCKS

SINGLE CONTACT POINT BLOCK

Part No.	Color	1-9	10-99	100+
03TB-SNG	White	$ 0.30	$0.25	$0.20
03TB-IVR	Ivory	0.30	0.25	0.20

QUAD CONTACT POINT BLOCK

Part No.	1-9	10+
03TB-Quad	$ 2.50	$1.95

LED CONTACT POINT BLOCK

Part No.	1-9	10-99	100+
03TBLED	$ 0.35	$0.30	$0.25

RSR POWERED BREADBOARD

MODEL PBB-272 AND PBB-509

PBB-509

Provides user with efficient way to breadboard electronic circuits. Includes **three** regulated power supplies along with easy-to-use breadboards. Two LCD voltmeters show 0–15V positive and 0–15V negative outputs.

- DC Power Supplies: +5@1A; variable 0 to 15V@500mA Input Power: 120VAC @ 60Hz
- Illuminated power switch
- Sturdy metal case
- Solderless breadboard
- 5 distribution and 3 terminal strips (2390 tie points)
- 2 LCD voltmeters
- One +5V DC @ 1A
- One 0 to +15V (500mA) variable supply
- One 0 to –15V (500mA) variable supply
- **Size:** 10.5" x 8" x 3.5"; **Weight:** 6.5 lbs. ***(PBB-272)*** 7 lbs ***(PBB-509)***

Part No.	Description	Price
03PBB272	Powered Breadboard	$69.95
03PBB509	Powered Breadboard w/LCD Display	88.50

POWERED BREADBOARDS – *DELUXE MODEL*

- **DC Power Supplies:** +5V@1A; variable power 0 – 18V@300mA **Input Power:** 120VAC@60Hz
- Outputs are short circuit protected
- Illuminated Power Switch
- Sturdy Metal Case provides well-grounded environment
- Solderless breadboards with 2390 tie points
- **Box Size:** 8" x 3" x 9"; **Weight:** 6.2 lbs.

Part No. 03PBB201 • Price: $115.00

Global Specialties

PRO-S LAB STATION

Powered prototyping system set-up. Perfect for education use, includes breadboard, DC power pack and appropriate connectors, plus jumper wires.

- Includes Global Model PB 10 proto board
- DC power adapter that mates with board
- 25 pre-cut jumper wires

Part No	1-9	10+
03GLPROS	$85.00	$79.00

COMPONENTS SUITABLE FOR BREADBOARDING

SLIDE SWITCH MINI

Part No.	Description	1-9	10-99	100+
17SLDH251	SPDT– .1" center fits breadboards	1.00	0.90	0.85

INCANDESCENT LAMPS

BI-PIN – 6V TO 24V

For part numbers and prices, please refer to ***Page 206***

SPEAKER WITH PC LEADS

Part No.	Size	1-9	10+
26SPPC	1" Dia	$1.85	$1.65
26SPSM	1.4" Dia	0.75	0.65

POTENTIOMETERS

CERMET, 1/2W

"18STS" series, values from 500 to 5M ohm. For part numbers and prices, please refer to ***Page 237-238.***

MOMENTARY SWITCHES

Part No.	Description	1-9	10+
17TP11CG-PC-2	SPST NO	$2.05	$1.80
17TP11FG-PC-2	SPDT Mom	2.25	2.05

RSR CLEAR / SEE-THRU BREADBOARDS / SOLDERLESS

Closeup View

- Clear / see-thru making it easier for students to learn prototyping using breadboards
- Ideal for testing, prototyping and experimentation.
- Aluminum backing, binding posts, nickel plated clips

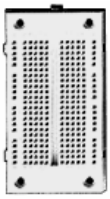


Fig. A

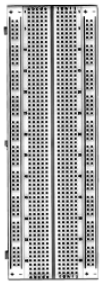


Fig. B

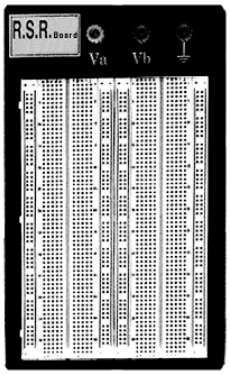


Fig. C

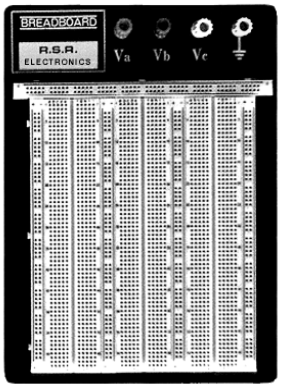


Fig. D

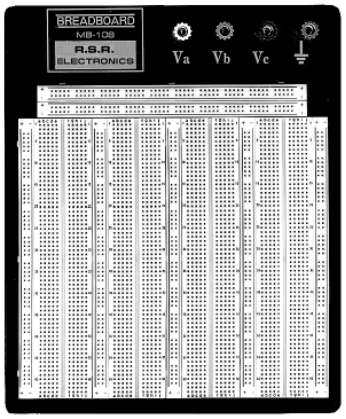


Fig. E

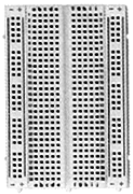


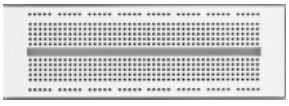
Fig. F

Part No.	Wire Kit	Terminal Strips	Bus Strips	Fig.	Binding Posts	Contact Points	Size	1-9	10+
03WCB101		1	2	A	—	270	3.3"x1.8"	$2.95	$2.50
03WCB102		1	2	B		830	6.5"x2.1"	4.75	4.25
03WCB102WWK	Yes**	1	2	B	—	830	6.5"x2.1"	6.95	6.50
03WCB104		2	4	C	3	1,660	8.7"x5.9"	14.95	14.50
03WCB104WWK	Yes*	2	4	C	3	1,660	8.7"x5.9"	17.50	16.50
03WCB106		3	5	D	4	2,390	9.4"x7.7"	18.50	17.95
03WCB106WWK	Yes*	3	5	D	4	2,390	9.4"x7.7"	21.50	20.50
03WCB108		4	7	E	4	3,220	10.2"x9.4"	26.95	24.95
03WCB801		1	2	F		400	3.3"x2.1"	3.25	2.95

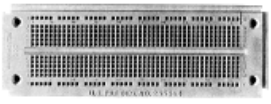
**** 140 pc Wire Kit; ** 70 pc Wire Kit***

Global® Specialties

SOLDERLESS BREADBOARDS



A



B

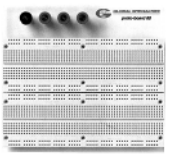
Part No.	Model	Dimensions	Fig.	Tie Pts	IC Capacity	1-9	10+
03EXP300E	EXP-300E	6.5" x 1.75"	A	550	5	$6.90	$6.65
031031350	EXP-350	3.6" x 2.1"	B	270	3	7.95	6.95

Global® Specialties

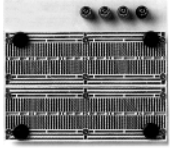
TRANSPARENT PROTO-BOARD®

Specifically designed for educational training. Two Global UBS-100's are screwed to a clear Plexiglass plate, leaving the pin layout and bus strip pin connectors clearly visible. Three red and one black binding posts are provided

- 1,680 tie points, 16 IC capacity (based on 14 pin/IC)
- Lifetime warranty on sockets



Front

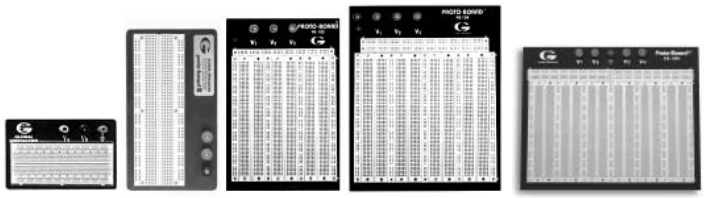


Rear

Part No	1-9	10+
03PB60	$52.00	$47.50

Global® Specialties

SOLDERLESS PROTO-BOARD® SYSTEMS



PB-83 PB-10 PB-103 PB-104 PB-105T

Part No.	Model	Kit / Assem	Terminal Strips	Bus Strips	Total Tie Points	Size	1-9	10+
03PB83	PB83	Kit	1	2	830	7" x 4"	$19.50	$18.35
031041000	PB10	Assem.	1	2	840	7" x 4"	22.95	21.95
031041030	PB103	Assem.	3	5	2250	9" x 6"	45.00	43.00
031041040	PB104	Assem.	4	7	3080	9.8" x 8"	70.00	68.00
03PB105T	PB105	Assem.	5	4	4880	11" x 9.2"	99.00	95.00

RSR BASIC PROTOTYPING PARTS KIT

ONLY **$48.95**

PORTABLE PLASTIC PARTS CONTAINER
10 1/2 x 6 1/2 x 1 1/2; flexible division polypropylene

RESISTORS: 1/4W – 5 each
10 ohm, 100 ohm, 470 ohm, 1K, 2.2K, 4.7K, 10K, 27K, 47K, 100K, 220K, 330K, 470K, 1M

CAPACITORS: 50V Radial Electrolytics – 2 each
1 f, 4.7 f, 10 f, 47 f, 100 f, 470 f, 1000 f

CAPACITORS: 100V Radial DIP Mylar – 2 each
.001 f, .0047 f, .01 f, .047 f, .1 f, .33 f

CAPACITORS: 500V Ceramic Discs – 3 each
2.2pf, 4.7pf, 10pf, 15pf, 22pf, 47pf, 100pf, 220pf, 470pf, 680pf

INDUCTORS: 1 each
4.7 h, 10 h, 47 h, 100 h, 470 h, 1mh, 10mh, 33mh

TRIMPOTS: Single Turn Cermet – 1 each
500 ohm, 1K, 5K, 50K, 100K, 500K, 1M

SWITCHES: 2 each
SPDT Toggle; N.O. Pushbutton; SPDT slide, 8-Position DIP

LEDs: Standard T 1 3/4 size – 10 each
Red, Green, Yellow

DISPLAYS: 2 each
7-Segment Common Cathode; 7-Segment Common Anode;

INTEGRATED CIRCUITS: 2 each
7805, 7812 Regulators, LM386 Audio Amp, 555 Timer, 741 Op Amp, 74LS00, 74LS02, 74LS08, 74LS10, 74LS47, 74LS74, 74LS86, CD4013, CD4017

TRANSISTORS: 2 each
PN2222, PN2907, 2N3055, 2N3904, 2N3906, 2N5457

DIODES: 2 each
1N4148, 1N4001, 1N34, 1N4728, 1N4733, 1N4739, 1N4743, 1N4747

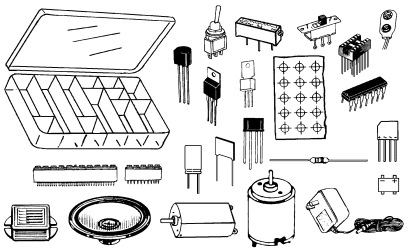
IC SOCKETS: Low Profile – 2 each
8-pin, 14-pin, 16-pin, 24-pin, 40-pin

MISCELLANEOUS:
25' 22AWG Hook-Up Wire, Alligator Lead Sets (Red & Black), 5V DIP Relay, Photo Cell, Electret Mike, Binding Posts (Red & Black), Tip Jacks (Red & Black), Heat Sinks (TO-5 & TO-18), 1.5 Amp 100V bridge, 4 Amp 200V SCR

LARGE STORAGE CABINET: ***(Additional Option)***
Parts Storage Cabinet, 11 1/4" x 12" x 6" – 30 drawers

Part No.	Description	Price
32BPPK	Prototyping Parts Kit	$48.95
061130	Large Storage Cabinet	38.98

RSR BASIC PROTOTYPING PARTS KIT II



ONLY **$49.95**

PORTABLE PLASTIC PARTS CONTAINER
10 1/2 x 6 1/2 x 1 1/2; flexible division polypropylene

RESISTORS: 1/4W – 5 each
220 ohm, 470 ohm, 680 ohm, 1.5K, 3.3K, 6,8K, 15K, 33K, 56K, 68K, 150K, 270K, 390K, 560K, 2.2M

CAPACITORS: Radial Electrolytics – 2 each
2.2 F, 22 F, 33 F, 220 F, 330 F, 2,200 F

CAPACITORS: 100V Radial DIP Mylar – 5 each
470pF, .001 F, .0022 F, .0033 F, .0047 F, .0068 F

CAPACITORS: 100V Radial DIP Mylar – 2 each
.01 F, .022 F, .033 F, .068 F, .22 F, .47 F

TRIMPOTS: Multi-Turn, Precision Bourns 3006P Series Style – 1 each
100Ω, 200Ω, 2K, 10K, 20K, 1M

POTENTIOMETERS: 2 each of following
1.5 K ohm panel mount 1/2W with 3/8" shaft, solder lug terminals
10K panel mount 1/2W with 1" shaft, solder lug ternimals
100K PC mount with 1: shaft

IC SOCKETS: Wire Wrap Sockets – 1 each
8 pin, 14 pin, 16 pin, 24 pin, 40 pin

PERF BOARDS: 1 each of following
3" x 4.5" (29 x 44 holes) and 4.5" x 6.5" (44 x 64 holes)

INTEGRATED CIRCUITS: 1 each of following
7905, 7912 (regulators), LM380 audio amp, 556 dual timer, 1458 dual comp. op amp, LM324 low power quad op amp, 74LS04, 74LS20, 74LS32, 74LS90, 74LS174, CD4001, CD4011, CD4071, CD4511

TRANSISTORS: 2 each MPSA20, PN3638, TIP31, TIP32, 2N4401, 2N4402

SCR, TRIAC, DIAC, BRIDGES: 2 each
2N5060 SCR, Q200E3 Triac, ST2 Diac, 1A 100V DIP bridge rectifier, 4A 100V bridge

LED'S:
Bi-Polar (2 each), Rectangular red (10 each), mini 3mm red, green and yellow (10 of each color), 2 each 7 segment Display (08NSN584), 1 each bar graphs red (08DC10IDA), green (08DC10GDA) yellow (08DC10YDA)

SWITCHES: 2 each
SPDT center off toggle, DPDT slide

MISCELLANEOUS:
AC to DC wall plug adaptor, buzzer, speaker, DC motors (2 different voltages), 9V battery snap

Part No. 32BPK2 • Price: $49.95

Pomona Electronics DIE CAST BOXES

WITH COVER

SIZE A: 1.13" X 1.50"

SIZE B: 1.38" X 2.25"

Ideal for circuitry prototyping. Securely seal signal sensitive cables and wires.

Part No.	Size	Connectors	Price
033753	A	—	$7.95
033751	A	BNC (F) to BNC (F)	27.95
033752	A	BNC (F) to BNC (M)	25.95
032417	B	—	7.25
033230	B	BNC (F) to BNC (F)	21.35
033231	B	BNC (F) to BNC (M)	25.95

ELECTRONICS COMPONENTS HOBBY PAK

Plastic container with flexible dividers. Contains 690 components:

- Resistors (73 values) ; 365 pcs
- Capacitors (Disc, Mylar, and Electrolytics from 2.2 ρf to1,000 μf)
- LEDs (20 Different kinds)
- LED Displays (4)
- Photocells (2)
- Digital ICs (2 ea) 74LS - 7 diff. values
- Linear ICs (2 ea) 555, 741, 386
- Regulators (2 ea) 7805, 7812, LM317-T
- Transistors (2 ea) 2N3904, 2N3906, PN2222, 2N3055
- Diodes (2 ea) 1N4007, 1N4148, 1N4728, 1N4733, 1N4739, 1N4744
- Bridge Recitifiers (2) RS406
- Inductors (1 ea) 10μh, 33μh, 47μh, 100μh,1mh, 10mh, 33mh,100mh
- Hookup wire spools (2)
- Alligator Lead Set
- Relays (5V & 12V)
- Microphone, Speaker and Buzzer
- 9V battery snap
- Trim Pots (1K, 10K, 50K, 100K, 1M)
- Switches (2 ea) push button, SPST slide, DPDT slide, 8 pos DIP
- Resistor Guide and Capacitor Guide
- Wire Cutter Stripper (060220)
- DC Motor (3V, 9V)
- Prototype Board (0302PB10) and Breadboard (03MB102)

Part No. 32ECHPK1 • Price: $65.95

adafruit BREADBOARD PCB

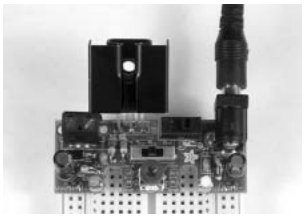
Half Size

Full Size

The top side has a white silkscreen, and the same markings you're familiar with, to make transferring components easy. The bottom has the 5-hole pad design that matches a classic breadboard, with 4 power bus lines on the sides, and no mask so you can easily cut traces when necessary. All holes are thru-plated for strength - these won't peel off with rework.

Part No.	Description	Price
03AD590	Full Size (830 tie points	$19.90
03AD571	Half size (400 tie points	12.50

adafruit ADJUSTABLE BREADBOARD POWER SUPPLY KIT - V1.0



This kit is for making your own breadboard-friendly very low dropout adjustable power supply. A good power supply is essential to electronic projects. While there are many existing designs for adjustable power supplies, this one makes improvements that make it more useful for hobby designs

- MIC2941 regulator has guaranteed 1.25A output
- Short circuit and overheating protection
- 2.1mm DC jack and terminal connector for voltage inputs
- Two indicator LEDs for high and low voltages
- Output selection switch to select from 3.3v, 5v and Adjustable
- Onboard potentiometer for adjusting voltage from 1.25V up to within 0.5V of the input voltage. (20V max)
- On/Off switch for entire board
- Heat sink included

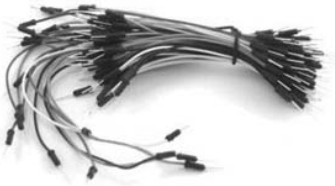
Part No. 32ADBPSK • Price $15.00

JUMPER WIRE KITS

These wires come in five colors and two different lengths. Available in male pin to male pin; male pin to female terminal; female to female terminal

Part No.	Description	Price
2700JWK10	10 pcs, male/male, 5 colors, 6" long	$3.90
2700JWK11	10 pcs, male/male, 5 colors, 12" long	3.90
2700JWK12	10 pcs, male/female, 5 colors, 6" long	3.90
2700JWK13	10 pcs, female/female, 5 colors, 6" long	3.90
2700JWK14	30 pcs, 10 pcs ea, m/m, m/f, f/f, 5 diff colors, 6" long	9.95
2700JWK15	40 pcs, 10 pcs ea m/m, 6" long, 10 pcs m/m 12" long, 10 pcs f/f 6" long, 10 pcs f/f 12" long. All items 5 diff. colors	12.95
2700JWK16	Jumper Wire Kit F/F, 12", 10 pcs	4.25

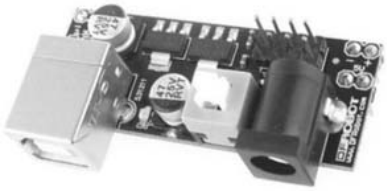
JUMPER WIRE KIT



- 75 piece
- Solid pin at each end
- 55 short jumpers (3 1/8")
- 10 medium jumpers (4 7/8")
- 5 long jumpers (6 3/8")
- 5 extra long jumpers (8")
- Colors: Yellow, Green, Black, Orange, Blue, White and Red

Part No.	Price
32JWKZN	$5.50

BREADBOARD POWER SUPPLY KIT 5V / 3.3V



This is a very simple pre-assembled board that takes a 6-12V voltage input and outputs a selectable 5V or 3.3V regulated voltage. All headers are 0.1" pitch for simple insertion into a breadboard. It can be either powered from 6-12 DC2.1 power jack or from USB power. The maximum current it can provide is 500mA. No assembly required.

Part No. 01DFR0140 • Price $6.90

GLOBAL SPECIALT SURFACE MOUNT TO DIP ADAPTOR KIT

Fig A

Fig B

Collection of SOIC, SSOP to DIP adaptor sockets which allows the user to solder popular surface mount IC's.

Part No.	Description	Fig	Price
03GSPAK1	Collection of 6 SOIC, SSOP	A	$65.00
03GSPAK2	Collection of 11 SOIC, SSOP & MSOP	B	$145.00

CUSTOM PART & COMPONENT KITS PACKAGED TO FIT YOUR EXACT NEEDS

YOU ALWAYS HAVE IT YOUR WAY!

CUSTOM PACKAGING • WIDE SELECTION OF QUALITY, BRAND NAME TOOLS • NUMEROUS OPTIONS...INCLUDING RESISTORS, CAPACITORS, SEMI-CONDUCTORS, WIRE TOOLS, TEST LEADS, PROBES, TEST EQUIPMENT AND MUCH MORE!

NO INVENTORY TO MAINTAIN
Kits are shipped pre-packaged.

ELIMINATES INVENTORY INVESTMENT
Your kits arrive just when you need them.

YOU DON'T HANDLE PARTS OR COMPONENTS
Every kit is custom packaged with the exact parts necessary to meet your individual course objectives.

ELIMINATES PARTS PROCUREMENT
You get all the advantages of our centralized purchasing. These saving are automatically passed on to you without the bother or trouble of procurement.

SELECT THE EXACT EQUIPMENT YOU NEED:

CAPACITORS
Ceramic Disc
Mylar
Tantalum
Electrolytic

ELECTRICAL HARDWARE
Wire
Fuses
Jacks
Banana Plugs
Binding Posts
Connectors
Sockets
Breadboards
Test Leads

ELECTRONIC EQUIPMENT
Logic Probes
Power Supplies
Multimeters
Oscilloscopes
Educational Trainers

INTEGRATED CIRCUITS
TTL
CMOS
Linear
Memory
Microprocessor
Peripheral Components

MAGNETIC PRODUCTS
Power Transformers
Audio Transformers
Inductors
Cores

OPTO DEVICES
LEDs
Displays
Bar Graphs
Arrays
Dot Matrix
Fiber Optic Devices

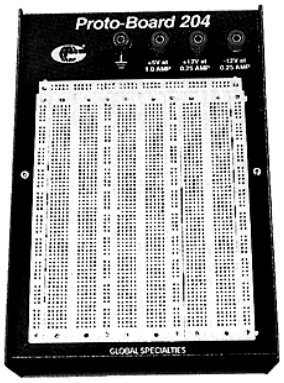
POTENTIOMETERS
Single Turn
Multi Turn
Panel Mount

RESISTORS
Carbon Film
Metal Film
Wire Wound
Networks

SEMICONDUCTORS (DISCRETE)
Diodes
Transistors
Diacs
SCRs
Triacs

SWITCHES
Toggle
Slide
Push Button
Rotary
Dip

Global® Specialties POWERED BREADBOARD



POWER SUPPLIES:

+5 VDC:
(PB-203A, PB-204)
Voltage: 5.0 25 VDC
Current: 1.0 Amp max, current limited
Ripple: ≤10mV p-p at max current

+15 VDC: (PB-203A only)
Voltage: Adjustable internally
+5.5–18 VDC
Current: 0.5 Amp max @ + 25 VDC,
current limited
Ripple: 10mV p-p at max current

+12 VDC: (PB-204 only)
Voltage: Fixed
Current: 250 mA max, current limited
Ripple: 20mV p-p at max current

–15 VDC: (PB-203A only)
Voltage: Adjustable internally -5.5 – 18 VDC
Current: 0.5 Amp max @ –15 VDC, current limited
Ripple: 10 mV p-p at max current

–12 VDC: (PB-204 only)
Voltage: Fixed
Current: 250 mA max, current limited
Ripple: 20mV p-p at max current

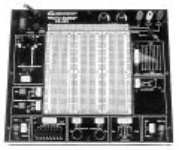
POWER:
120 VAC, 60Hz or 220 VAC, 50Hz. Specify when ordering

DIMENSIONS:
9.8"L x 6.6"W x 3.3"H; (248 x 168 x 83mm); 5.5 lbs (2.5kg)

Part No.	Description	Price
03PB204	Assembled	$161.00
03PB203A	Assembled	199.00

Global® Specialties PROTO-BOARD® DESIGN WORKSTATION SERIES

MODEL PB503 – Bench-Top Workstation
MODEL PB503C – Portable Unit (Includes Rugged Carrying Case Meter sold separately)
MODEL PB505 – Advanced Design; Enhanced Features


PB-503

PB-503C

PB-505

- Multiple test equipment features in one complete instrument.
- 100KHz function generator with sine, square, triangle and TTL.
- Triple output power supply offers 5VDC fixed plus two variable outputs: 1.3 to 15VDC.
- Removable breadboard sections.
- 8 channel logic monitor.
- 8 selectable logic switches.
- Two digital pulsers, audio experimentation speaker.
- High and low buffered logic indicators.
- **Additional Features (*Model PB505)*** – Larger breadboard area, low voltage (12.5VAC), AC supply, built in logic probe, BCD to 7 segment decoder/display, compatible with optional trainer boards.
- **Courseware for Global PB-503 and PB-505 Trainers**
  Electronic Fundamentals - Student Textbook, Instructor Guide, Breadboard Lab Manual & Instructor Solution Guide with comprehensive coverage basic theories in AC/DC, circuit design, components, schematic symbol guide, formulas, technical glossary
  Digital Electronics Courseware - Student Textbook and Instructor Guide covering sourse in Digital logic in several numbering systems, Boolean algebra, Flip-Flop circuitry, Counters and registers building up to Microcomputing

Part No.	Description	Price
01PB503	Design Workstation – Bench Style	$369.00
01PB503C	Design Workstation – With Case Meter sold separately	430.00
01PB505	Advanced Circuit Design Trainer	540.00
01GSC2301	Student Text – Electronic Fundamentals	46.95
01GSC2302	Instructor Guide - Electronic Fundamentals	32.95
01GSC2311	Breadboard Lab Manual - Electronic Fundamentals	46.95
01GSC2312	Instructor Solution Guide - Electronic Fundamentals	20.00
01GSC3200	Student Text – Digital Electronics	45.00
01GSC3201	Instructor Guide – Digital Electronics	49.95

Global® Specialties

ANALOG CIRCUIT TRAINER

MODEL PB-500

The PB-500 contains all of the functions required for studying and experimenting with active filters, operational amplifiers and other analog circuitry. The PB-500 is a complete analog training instrument which is compact, lightweight and extremely durable.

Power Supplies:
+12 volts +5% 200mA max; –12 volts +5% 200mA max, +5 volts +5% 250mA max.

Fixed Supplies:
+12 VDC +5% 150mA each short circuit protected. Variable Supplies: 0 to +7.5 VDC + 10% 0 to –7.5 VDC + 10% 50mA each. Both supplies short circuit protected and have LED short indicators and a 5V test point.

Uncommitted Functions:
2 slide posts, 10K and 100K +20%, 2 SPDT slide switches, 2 BNC connectors, 1 speaker, 2", 8 ohms

Dimensions: 2.562"H x 7.5"W x 10"D; **Weight:** 1 lb. 12 oz.

Part No. 01PB500 • Price $265.00

RSR POWERED BREADBOARD

MODEL PBB-272 AND PBB-509

PBB-509

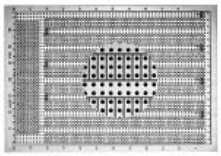
Provides user with efficient way to breadboard electronic circuits. Includes **three** regulated power supplies along with easy-to-use breadboards. Two LCD voltmeters show 0–15V positive and 0–15V negative outputs.

- DC Power Supplies:
  +5@1A; variable 0 to 15V@500mA
  Input Power: 120VAC @ 60Hz
- Illuminated power switch
- Sturdy metal case
- Solderless breadboard
- 5 distribution and 3 terminal strips (2390 tie points)
- 2 LCD voltmeters
- One +5V DC @ 1A
- One 0 to +15V (500mA) variable supply
- One 0 to –15V (500mA) variable supply
- **Size:** 10.5" x 8" x 3.5";
  Weight: 6.5 lbs. ***(PBB-272)***
  7 lbs ***(PBB-509)***

Part No.	Description	Price
03PBB272	Powered Breadboard	$69.95
03PBB509	Powered Breadboard w/LCD Display	88.50

VECTOR ELECTRONICS & TECHNOLOGY, INC. VECTORBORD®

4.5" X 6.5" – *MODEL 8001*



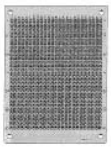
- Circuit pattern etched onto wiring side only
- Solder mount DIP sockets or IC devices with any lead spacing
- 3-hole solder pads (0.28" x 0.080") for interconnecting multiple component leads

Circuit Pattern:	3-Hole Solder Pad
Contacts:	N/A
Width/Thick:	6.50" / .062"
Height:	4.50"
16-Pin DIP Capacity:	20
Material:	CEM-1
FOR USE WITH:	
Wire-Wrap Terminals:	T44, T46, T49, T68
Solder Terminals:	T42-1, K24C, K31C
Wire-Wrap Socket Pins:	R32
Hole Diameter:	0.042"

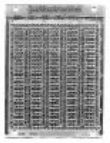
Part No. 0302V8001 • Price: $26.95

MODEL NOS. PB-8, PB-9

Solder-ringed holes accept DIPS, Sockets, Headers, Indexed for pin-out identification.



PB-8



PB-9

Part No.	Size	Holes	1-9	10+
0302PB8	$3^{11}/_{16}$" x $2^{13}/_{16}$"	750	$4.50	$3.95
0302PB9	$3^{3}/_{4}$" x $2^{7}/_{8}$"	750	4.50	3.95

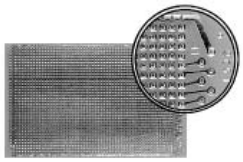
MODEL NO. PB-5 (IBM AT COMPATIBLE, FULL-LENGTH)

4.25" x 13.13". Double sided pads with plated through holes. I/O area for D-sub 9 to 25 pin connector. Separate busses for power and ground. 16 bit 49/98 contacts on 0.1 center. .042" diameter holes on 0.1" grid.

Part No.	1-9	10+
0302PB5	$24.50	$23.50

EUROCARD

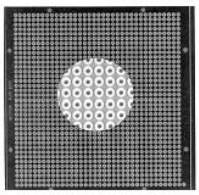
- 1-hole island, FR-4
- Single side, .06", 1 oz.



Part No.	Description	1-9	10+
0302ECS1	3.9" x 6.3"	$4.95	$4.50
0302ECS12	3.9" x 3.1"	2.95	2.75

VECTOR ELECTRONICS & TECHNOLOGY, INC. VECTORBORD®

MODEL 8015 4.0" x 6.0" (2 sided pattern)
MODEL 8015-1 4.0" x 4.0" (1 sided pattern-plated holes)

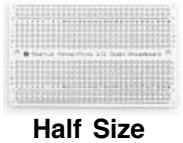


- Isolated round pads around each hole ***(8015-1)***
- Plated-thru holes
- 0.080" diameter, isolated solder pad around each hole, both sides
- Unrestricted component placement, extended area for high density applications

Circuit Pattern:	Pad-Per-Hole
Contacts:	N/A
Width/Thick:	4.00" / .062"
Height:	6.00"
16-Pin DIP Capacity:	72
Material:	FR4
FOR USE WITH:	
Wire Wrap Terminals:	T44, T46, T49, T68
Solder Terminals:	T42-1, K24C
Wire-Wrap Socket Pins:	R32
Hole Diameter:	.042"

Part No.	Description	Price
0302V8015	4" x 6"	$11.35
0302V8015-1	4" x 4"	7.25

adafruit BREADBOARD PCB



Half Size

Full Size

The top side has a white silkscreen, and the same markings you're familiar with, to make transferring components easy. The bottom has the 5-hole pad design that matches a classic breadboard, with 4 power bus lines on the sides, and no mask so you can easily cut traces when necessary. All holes are thru-plated for strength - these won't peel off with rework.

Part No.	Description	Price
03AD590	Full Size (830 tie points	$19.90
03AD571	Half size (400 tie points	12.50

RSR BASIC PROTOTYPING ACCESSORY TOOL KIT

- 1 – 4" x 6" Perf Board
- 1 – $3^{3}/_{4}$" x $3^{3}/_{8}$" Single Sided Prototype Board
- 1 – MB-102 Breadboard
- 20 – Breadboard Pins
- 1 – Wire Wrap Tool
- 1 – Diagonal Cutters
- 1 – Long Nose Pliers
- 1 – Wire Stripper
- 1 – Lighted Magnifier
- 1 – Lead Bending Gauge
- 2 – I.D. Tags for Wire Wrap Sockets: 8 Pin ID
- 4 – I.D. Tags for Wire Wrap Sockets: 16 Pin ID)
- 2 – I.D. Tags for Wire Wrap Sockets: 28 Pin ID
- 2 – I.D. Tags for Wire Wrap Sockets: 40 Pin ID
- 2 – 8 Pin Wire Wrap DIP Socket
- 4 – 16 Pin Wire Wrap DIP Socket
- 2 – 28 Pin Wire Wrap DIP Socket
- 2 – 40 Pin Wire Wrap Socket
- 4 – Single Row Header (10 Pin)
- 1 – 30 AWG Black Wire Wrap Wire (100')

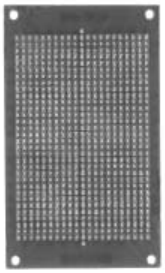
- 1 – 30 AWG Red Wire Wrap Wire (100')
- 1 – 22 AWG Solid Black Wire (25' Spool)
- 1 – 22 AWG Solid Red Wire (25' Spool)
- 1 – 22 AWG Solid White Wire (25' Spool)
- 1 – 22 AWG Solid Yellow Wire (25' Spool)
- 1 – IC Hook – IC Hook Test Lead Set
- 1 – Tool Box w/Top Storage Trays

Part No. 32PROTOTK • Price: $59.95

PROTOTYPING BOARDS

MODEL NO. PB-1 (4 1/8" x 2 3/8")

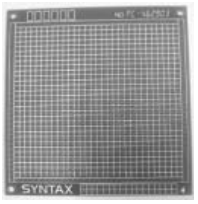
Double sided pads with plated through holes. Silk-screened legend on component side indicates foil pattern on solder side. .042" diameter holes on 0.1" grid.



Part No.	1-9	10+
0302PB1	$4.50	$4.00

MODEL NO. PB-2 (3 3/4" x 3 3/8")

Single sided pads. Four separate busses. Silk-screened legend on component side indicates foil pattern on solder side. I/O connector area. .042" diameter holes on 0.1" grid.



Part No.	1-9	10+
0302PB2	$3.75	$3.25

MODEL NO. PB-3 (5" X 8")

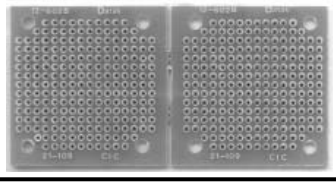
Same as PB-1 except this model also has 4 separate busses and is approximately 4 times larger.

PB-3

Part No.	1-9	10+
0302PB3	$19.95	$18.95

MODEL NO. PB-11 (3.6" x 1.8")

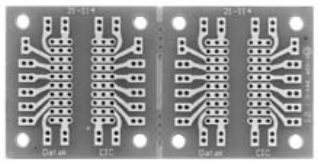
General purpose mini-board. Single sided pads. Size: 3.6" x 1.8"



Part No.	1-9	10+
0302PB11	$1.20	$0.95

MODEL NO. PB-12 (3.6" x 1.7")

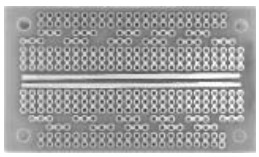
General purpose IC board. Single sided pads. Size: 3.6" x 1.7"



Part No.	1-9	10+
0302PB12	$0.90	$0.85

MODEL NO. PB-19 – (2.9" X 1.7")

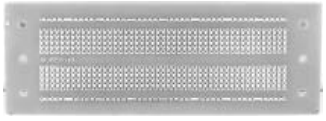
General purpose small single sided board.



Part No.	1-9	10+
0302PB19	$1.05	$0.95

MODEL NO. PB-10 – (6" X 2 1/8")

Printed circuit board with layout matching solderless breadboard MB102. Features a total of 550 predrilled indexed connect points.



PB-10

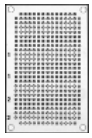
Part No.	1-9	10+
0302PB10	$3.25	$2.65

MODEL NO. PB-13, PB-21

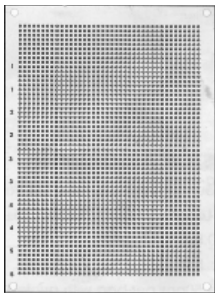
(PB-13: 6.3" x 4.5")

(PB-21: 2.8" x 1.8")

General purpose board. Single sided pads. Solder-ringed holes accepts DIPs, sockets, headers.



PB-21



PB-13

Part No.	Size	No. of Holes	1-9	10+
0302PB13	6.3" x 4.5"	2,200	$2.50	$2.20
0302PB21	2.8" x 1.8"	356	0.95	0.85

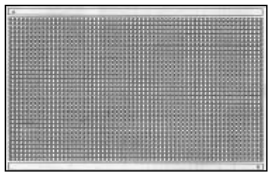
MODEL NOs. PB-16; PB-17

(PB-16: 6.3" x 3.9")

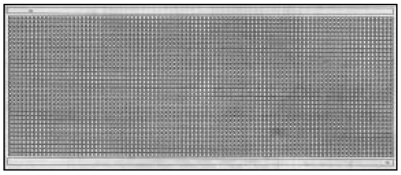
(PB-17: 9.9" x 3.9")

Experiment board 0.1" hole spacing. Etched copper stripes. All holes in a row along "L" are interconnected.

PB-16



PB-17

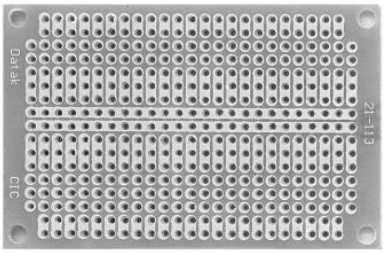


Part No.	Size	1-9	10+
0302PB16	6.3" x 3.9"	$1.65	$1.45
0302PB17	9.9" x 3.9"	2.65	2.40

MODEL NO. PB-18

(2.8" X 1.8")

General purpose. Single sided pads with power bus. Similar to Radio Shack® #276-150.

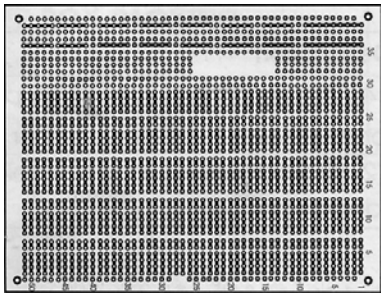


Part No.	1-9	10+
0302PB18	$1.45	$1.35

MODEL NO. PB-20

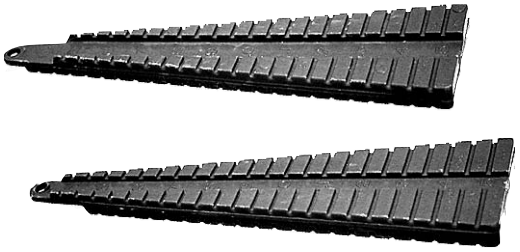
(5.50" X 4.30")

General purpose large single side board.



Part No.	1-9	10+
0302PB20	$1.95	$1.75

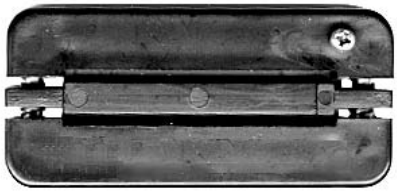
LEAD BENDING GAUGES



Double-sided. Forms leads quickly. Graduated in .05" increments. Radiused edges eliminate scarring of leads. Model ST accepts 1/4W and 1/2W components. Model PR accepts 1W and 2W.

Part No.	Description	1-9	10+
0664ST010	1/4W, 1/2W	$3.95	$3.75
0664PRO12	1W, 2W	3.95	3.75

IC PIN STRAIGHTENER



Straighten bent pins easily and safely.

- Straighten 8, 14, 16, 18, 20, 24, 28, 40, 48 pin ICs
- Size: 3.3" x 1.5" x 0.4"
- Color: black plastic
- Includes a ground terminal

Part No.	1-9	10+
03ICS-01	$7.95	$7.70

RSR

COMPUTER TOOL KIT

ECONOMY MODEL - 12 PC.

MODEL CTK1

- 2-Slotted, 2 Phillips Screwdrivers
- Torque Screwdriver
- Three-Claw Part Holder
- Assembly Tweezers
- IC Extractor
- 2- Nut Drivers
- Spare Parts Tube
- Carrying Case

MODEL CTK2

Same as CTK1 with IC inserter and w/o spare parts tube.

Part No.	1-9	10+
3200CTK1	$8.95	8.25
3200CTK2	9.95	8.25

IC EXTRACTOR

Part No.	Fig	1-9	10+
060400	A	$1.25	$0.90
060401	B	3.90	3.40
060404 *(Insulated Handle)*	A	1.30	0.95

Fig. A Fig. B

IC INSERTION / EXTRACTION TOOL

Inexpensive and useful tool for inserting and extracting 8, 14, 16, 20 pin ICs.

Part No.	1-9	10+
060402	$2.25	$1.95

IC INSERTION TOOL

Inexpensive and useful tool for inserting 14 and 16 pin ICs

Part No.	1-9	10+
060403	$2.15	$1.85

CAN WRENCH

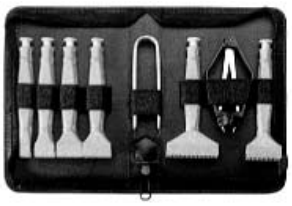
Double end CAN socket wrench. 3/8" and 7/16", HEX. Orange, ergonomic handle. Used in placing fuses in cable terminals and connecting wires to fuses and binding posts. The walls on both sockets are thin enough so they can be used to work locking devices on most terminals and cabinets. 7" long.

Part No. 0601M216CEX • Price: $11.95

IC INSERTION AND EXTRACTION TOOL KIT

9 PIECES

- Six IC insertion tools for: 8; 14/16; 18/20; 22; 24/28; and 32/40-pin ICs
- Universal extraction tool; PLCC IC extraction tool



Part No.	1-9	10+
3200CTK6	$15.95	$14.95

OK INDUSTRIES INC

IC INSERTER

For sensitive MOS and CMOS IC's. Terminal lug for attaching ground strap (strap not included).

A B C

Part No.	Fig.	1-9	10+
03MOS-1416	A	$16.50	$15.95
03MOS-2428	B	16.50	15.95
03MOS-40	C	19.95	18.95

COPPER CLAD CIRCUIT BOARDS

CEM-1 MATERIAL, 1/16", 1 OZ. COPPER

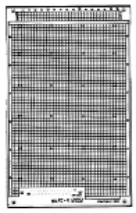
Part No.	Description	1-9	10+
97BS11	3" x 4"; single side	$0.95	$0.90
97BS12	5" x 6"; single side	1.95	1.80
97BS13	9" x 12"; single side	6.50	5.95
97BS14	24" x 36"; single side	33.95	31.95

FR-4 (FIBER GLASS), 1/16" THICK, 1 OZ. COPPER

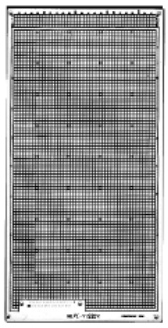
Part No.	Description	1-9	10+
97BS15	3" x 4" Single Sided	$1.35	$1.15
97BS16	5" x 6" Single Sided	2.95	2.80
97BS17	9" x 12 Single Sided	7.90	7.25
97BD11	3" x 4" Double Sided	1.75	1.50
97BD12	5" x 6" Double Sided	3.95	3.50
97BD13	9" x 12" Double Sided	8.25	7.70

MODEL NOS. PB-14, PB-15

Single sided pads. Four separate busses. Silk-screened legend on component side indicates foil pattern on solder side. I/O connector area. Holes provided for DB-25 footprint.



PB-14



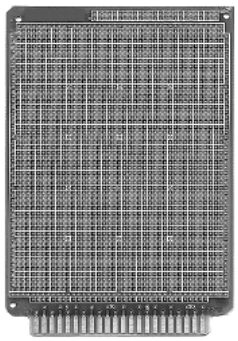
PB-15

Part No.	Size	1-9	10+
0302PB14	6 5/16" x 3 15/16"	$7.50	$6.25
0302PB15	10" x 5"	14.95	13.95

MODEL NO. PB-4

EDGE CARD — 6 1/2" x 4 1/2"

.156" edge-connector board. Single sided pads. Four separate busses on each edge. I/O connector area.



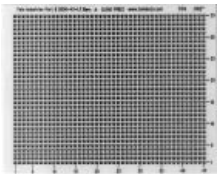
PB-4

Part No.	1-9	10+
0302PB4	$11.95	$10.50

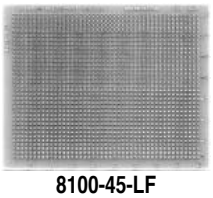
Twin Industries LEAD FREE PROTOBOARDS

If you require a lead-free environment, these boards have replaced the old standard tin/lead finish with gold plating. Useful in developing lead-free prototypes and working with lead-free soldering techniques.

- High temperature laminate for lead-free processing temperatures. 0.062" thrick
- Gold plating over copper
- Plated through-holes with .1" spacing
- Lead-free models



8000-45-LF



8100-45-LF

Part No.	Description	Price
038000410LF	4" x 10" Lead Free Board	$24.00
03800045LF	4" x 5" Lead Free Board	12.50
03810045LF	4 x 5" LF Board with Ground Plane	12.50
03820045LF	4 x 5" LF Board, Ground Plane both Sides	12.50

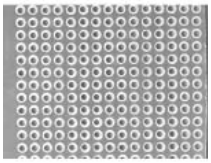
PRE-SENSITIZED POSITIVE PHOTO RESIST PRINTED CIRCUIT BOARDS

- Ideal for small production runs.
- Highly sensitive positive resist coated on copper foil.
- Can go direct from artwork. No need to reverse artwork.
- Fiberglass substrate; 1 oz. copper foil.
- To develop use pos. type developer 0312-402

Part No.	Description	Price
03PSPB1	3.9" x 5.9"-singleside	$7.50
03PSPB2	4.5" x 6.5"-singleside	7.95
03PSPB3	4.5" x 6.5"-doubleside	7.95

PERF BOARDS

Ideal for prototyping work. .045" dia. holes on 0.1" center. 1/16" thick material (natural phenolic). No solder pads.



Part No.	Width and Length	No. of Holes	1-9	10-99
03013399	3" x 4"	29 x 40	$1.90	$1.70
03013404	4" x 6"	40 x 60	3.75	2.95
03013427	6" x 17"	59 x 169	8.50	7.50

SNIP / CUTTER SHEET METAL, PC BOARD

Metal Snip Right/Straight, Green

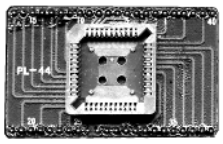
- Useful for cutting copper clad board
- 9-3/4" overall length, serrated jaws
- Can use to cut 18 gauge steel

Part No. 0602RLSP02 • Price: $5.95

PLCC PROTOTYPE ADAPTER

PLCC Socket mounted in a circuit board for easy prototyping.

Part No.	Description	Price
03PLCC1	28-Pin PLCC	$10.95
03PLCC2	44-Pin PLCC	10.95
03PLCC3	68-Pin PLCC	15.95
03PLCC4	84-Pin PLCC	19.95



SURFACE MOUNT IC ADAPTER

- Convert 8 pin, 14 pin, 16 pin SOIC package to DIP package
- Requires soldering

Part No.	1-9	10+
03SOPDIP16	$1.95	$1.50

DIP IC TEST CLIPS

Designed for easier DIP IC testing and troubleshooting. The heavy duty metal spring provides a firm positive grip to DIP under test.

Part No.	Description	Width	Price
03TC16	16-Pin (used for 8, 14, 16 pin IC's)	0.3"	$12.90
03TC28	28-Pin (used for 24, 28 pin IC's)	0.6"	15.90
03TC40-3M	40-Pin	0.6"	9.90

Pomona Electronics / 3M

SURFACE MOUNT TEST CLIPS

SOIC TEST CLIP

3M brand Small Outline IC test clips. Helical compression springs provide firm, positive contact pressure. Alloy (764) plated.

Part No.	Description	Price
03TCS08N	8-Pin	$11.50
03TCS16N	16-Pin – Narrow	11.50
03TCS20W	20-Pin – Wide	12.50
03TCS24W	24-Pin – Wide	13.75
03TCS28W	28-Pin – Wide	21.45

GLOBAL SPECIALTY ADAPTOR BOARDS - PROTOTYPING

- Spring loaded & snap enclosures ensure surface contact
- Connect SMT chips to Breadboard

Fig A Fig B Fig C Fig D Fig E

Part No.	Description	Fig	Price
03GSTSOP48S	48 Pin TSOP to Thru Hole	A	$105.00
03GSPLCC44	44 Pin PLCC to Thru Hole	B	99.00
03GSPLCC32	32 Pin PLCC to Thru Hole	C	95.00
03GSSOP16	16 Pin SSOP to Thru Hole	D	93.00
03GSSOP8	8 Pin SSOP to Thru Hole	E	99.00

PANAVISE BASE MOUNTS

308 WEIGHTED BASE | 311 BENCH CLAMP BASE | 312 PARTS TRAY BASE | 335 MAGNETIC BASE

- 3-Screw pattern accepts 201 & 300 series vise combos & bases
- All vise bases mounts include three mounting screws

Part No.	Description	Fig	Price
03PV308	Weighted Base	308	$26.99
03PV311	Bench Clamp base	311	44.99
03PV312	Parts Tray Base	312	18.99
03PV335	Magnetic Base	335	20.25

RSR HELPING HAND

Third hand for soldering, gluing, painting, and repairing. Great for holding PC boards. Adjust to any position or angle.

Part No.	Description	1-9	10+
060834	Helping Hand (w/o magnifier)	$3.50	$2.95
060836	Complete Set (Helping Hand/Magnifier)	3.95	3.50

PANAVISE STANDARD BASE

MODEL 300, 305

Holds all regular PanaVise Head and Circuit Board Holders. Single load Control Knob and exclusive Split-Ball feature have a range of tension which permits movement of work to any desired position. This base has three mounting holes for permanent attachment to work bench or various portable Base Mounts.

Part No.	Description	Price
03PV300	Regular Base	$24.49
03PV305	Low Profile Base	24.49

PANAVISE STANDARD HEAD

MODEL 303, 304

Jaws — 2 1/2" wide and open to 2 1/4". Nylon jaws have a satin finish to improve grip. This general purpose head has exceptional quality and strength.

Part No.	Description	Price
03PV303	Regular Head	$27.99
03PV304	Low Profile Head	34.99

PANAVISE CIRCUIT BOARD HOLDER

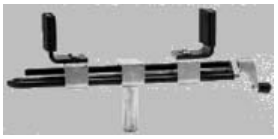
MODEL 315

It is designed to hold PC boards of any shape and size from 1/8" to 12" in width. Arm may be moved independently in either direction.

Part No. 03PV315 • Price: $35.99

PANAVISE SELF-CENTERING EXTRA WIDE OPENING HEAD

MODEL 376



Double action jaws allow fast opening and closing. The self centering feature permits holding heavier objects because weight is centered over the base. Opens to full 9". The reversible jaw pads are ribbed on one side and "V" grooved on the other. It can hold cylindrical or odd shaped items.

Part No. 03PV376 • Price: $53.99

PANAVISE PANAVISE JUNIOR

MINI PANAVISE *MODEL 201*

Vise head and base combo. Smaller version Panavise with all "tilt, turn and rotate" features of bigger models. Grooved jaws open 2 7/8". Three plane head movement (360 rotate, 360 swival, 210 pivot).

Part No. 03PV201 • Price: $26.99

PANAVISE VISE JR. VACUUM BASE

MODEL 209

- Ideal for field repairs, electronics, hobbies
- Jaws are 2"-tall, 1"-wide and open to 2.9"
- Lever locks vacuum pad on any smooth surface
- Grooved jaws for holding small objects
- Single knob controls head movement through 3 planes 210 tilt, 360 turn and 360 rotation

Part No. 03PV209 • Price: $31.49

PANAVISE STANDARD PANAVISE

MODEL 301 COMPLETE COMBINATION

- The easy-to-use single knob controls head movement through 3-planes: 90 Tilt, 360 Turn & 360 Rotation
- Jaws are 2.5" wide, 0.5" tall and open to 2.25"
- Nylon jaws offer excellent electrical insulation and gentle = holding power
- Base accepts all 300 series Heads and any 5/8" diameter post
- Base features 4.3125" bolt circle countersunk for three 1/4" flat-head screws *(not included)*
- **Height:** 6.25", **Weight:** 2.7 lbs.

Part No. 03PV301 • Price: $49.49

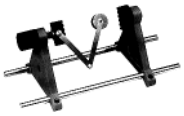
SWIVEL-HEAD

VACU-VISE *MODEL 400*

Hold even the most delicate work in this 360 swivel action Vacu-Vise. 90 tilting head allows for very accurate "Third Hand" control. Complete with rubber jaw covers. Jaws open to 3 inches. Zinc die cast.

Part No. 03VV400 • Price: $34.95

Weller® CIRCUIT BOARD VISE



- Complete work center for placing, soldering and desoldering printed circuit boards
- Spring clamps hold workpiece in place
- Rotates through 360 , allowing work performance at any convenient angle
- Adjustable features allow handling of variety of circuit board sizes
- Socket key included
- Maximum surface: 6 1/4" x 9 1/8"

Part No.	Description	Price
03ESF120ESD	Vise for holding circuit boards ESD safe	$51.91

PANAVISE ELECTRONIC WORK CENTER

COMPLETE SYSTEM *MODEL 324*

This work center gives you a Circuit Board Holder (#315), Standard Base (#300), Tray Base Mount (#312) and Solder Station all in one economical package. Sturdy and stable.

Part No. 03PV324 • Price: $89.99

PANAVISE MULTI-PURPOSE WORK CENTER

COMPLETE SYSTEM *MODEL 350*

This includes self centering Extra Wide Opening Head (#376), Standard Base (#300), and Tray Base Mount (#312). This unit can handle difficult to hold items

Part No. 03PV350 • Price: $89.99

PANAVISE RAPID ASSEMBLY CIRCUIT BOARD HOLDER

MODEL 333

For quick circuit board rotation and component insertion/soldering, nothing beats this work holding tool for speed and versatility.

- Features eight rotating adjustment positions at the head, six positive lock positions in the vertical plane, and variable height adjustment
- Hold circuit boards up to 12" (304.8mm) wide and up to 0.156" (4mm) thick

Part No. 03PV381 • Price: $87.99

PANAVISE VACUUM BASE

MODEL 381

Quickly attaches to any smooth non-porous surface with the flip of a lever. Take it anywhere you need it for hobbies, electronics and small home repairs

- Our Vacuum Base PanaVise is widely used for portable applications
- Single knob controls head movement through 3-planes: 90 Tilt, 360 Turn and 360 Rotation
- Jaws are 2.5" (63.5mm) wide, 0.5" (12.6mm) tall and open to 2.25" (57.1mm)

Part No. 03PV381 • Price: $67.49

PANAVISE WIDE OPENING HEAD

MODEL 396

- Working on large objects? The jaws on this vise open a generous 6". Ribbed neoprene jaw pads are 1.875" (47.6 mm high X 1.5" (38.1mm) wide and provide a sure grip to hold and insulate PC boards and other larger objects: reverse the pads and the wide "V" holds delicate clyndrical objects
- Single knob controls head movement through 3-planes: 90 Tilt, 360 Turn and 360 Rotation

Part No. 03PV396 • Price: $62.99

3M ANTI-STATIC TABLE MAT

DISSIPATIVE 3-LAYER

Top layer is durable static-dissipative to discharge static charged conductors. The middle layer is a conductive that provides discharge path to ground. The bottom layer is static-dissipative foam, a durable, nonskid cushion. Includes 2 female snaps and one 15' ground cord.

Part No.	Color	Size	Price
03AS8211	Brown	2' x 4'	$99.00
03AS8214	Blue	2' x 4'	97.95

3M FIELD SERVICE KIT

STATIC-DISSIPATIVE

Portable lightweight kit for electronic service technician. Kit includes static dissipative work surface with pocket, adjustable wrist band and ground cords.

Part No.	Description	Price
03AS8501	24" x 24" x .02"	$69.25
03AS8505	15" x 20" x .015"	77.50

3M STATIC CONTROL SHOE GROUNDING ASSEMBLIES

Static control heel-straps provide static protection while retaining worker mobility. One size fits most shoes. Comfortable elastic ankle strap.

Part No.	Description	Price
03AS2051	Shoe grounding assembly w/resistor	$10.95

ANTI-STATIC LABELS

Useful to alert personnel handling cartons & bags that the contents are static-sensitive. 500 labels per roll.
Size: 1 3/4" x 2 1/2".

Part No.	Description	Price
03ASL7102	Yellow with black type	$16.45

RSR WRIST STRAP

Protects IC's and other equipment from static discharge. Grounding cord is a coiled cord 6' or 10' long with 1MΩ resistor.

- **Material**: The conductive elastic band is made of polyster, and woven stainless steel / nickel fibers on interior surface.
- **Band Resistivity**: < 50Ω

Part No.	Description	1-9	10+
0302-BWS150	Medium Size – 6' Cord	$3.50	$2.75
0302-BWS160	Medium Size – 10' Cord	3.95	3.50
0302-BWS201	Adjustable Band – 6' Cord	3.95	3.50
0302-BWS203	Adjustable Band – 10' Cord	4.50	3.95

CORDLESS* ANTI STATIC WRIST STRAP

- Cordless wrist strap is used in applications where wrist strap is not convenient such as working stations that require standing or walking.
- Uses "SELGLARD" electric halo principle. It discharges body's static electricity through ***discharge box.***
- Cordless wrist strap can also be used with the ground cord which can be connected to earth.

* **CAUTION:** Not recommended for dry climate highly static sensitive applications

Part No	1-9	10+
03UCWS4	$6.95	$6.25

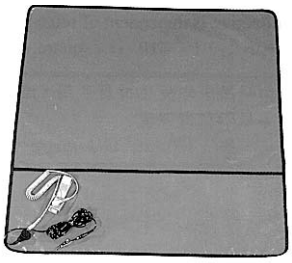
ANTI STATIC GLOVES

- **Material:** Polyester filament with woven conductive yarn.
- **Application**: Use in different environments such as the laboratory, aeorspace, electronics and semiconductor industries.
- **Resistivity**: $10^8 – 10^9$ Ω
- Slip proof

		Price / Pair	
Part No.	Description	1-9	10+
03UC-AG1S	Small	$2.50	$1.75
03UC-AG1M	Medium	2.50	1.75
03UC-AG1L	Large	2.50	1.75

ANTI STATIC FIELD SERVICE KIT

ECONOMY MODEL



- Provides convenient and effective ESD control workstation for field service applications.
- Durable red vinyl surface provides a highly effective dissipative work mat and can be used as a carrying pouch for PC boards.
- It connects easily with ground cord and an adjustable wrist strap.
- Two sewn-in pockets to hold tools or components
- **Mat Size** – 24" x 26"

Part No	1-9	10+
03UCSK1	$15.95	$14.50

ANTI-STATIC WORK MATS

Make your work place safe from static discharge. Made of semi-conductive vinyl that provides adequate discharging.

Part No.	Size / Application	Price
03ASW1	11" x 22" – Keyboard	$9.25
03ASW2	19" x 23" – CPU	11.95
03ASW3	24" x 24" – CPU & Keyboard	11.50
03ASW4	8" x 11" – Computer Mouse	4.50

ANTI STATIC FINGER COTS

- Finger cots are widely used by technicians who handle sensitive electronic parts.
- **Resistance:** About 10^8 Ω / square
- Packed 100 pcs / bag

Part No	1-9	10+
03UCC1-100	$2.95	$2.50

CONDUCTIVE BRUSH

- **Application:** Use to clean IC boards and parts, especially static-sensitive products.
- **Material**: The handle is made of conductive plastic, the comb is made of conductive Nylon.
- **Resistivity:** 10^4 – 10^6 Ω

Part No	1-9	10+
03UCBH1S	$3.50	$2.95

RSR

ANTI-STATIC FOAM

1/4" THICK

Conductive antistatic foam material for bench or shipping ensures a safe work area.

Part No.	Size	1-9	10+
0302ASF	4" x 5"	$0.90	$0.80
0302ASF1	24" x 12"	9.20	8.30

RSR

ANTI-STATIC BAGS

Provides static protection for PC boards and components during handling and shipping. 10 pieces per pak.

Part No.	Description	Price / Pak 1-9	10+
03ASB1	5" x 10" - Regular	$1.25	$1.05
03ASB2	8" x 12" - Regular	1.45	1.25
03ASB3	5" x 10" - Bubble	1.55	1.35
03ASB4	8" x 12" - Bubble	3.40	2.75

ANTI STATIC SHOE GROUNDER WITH SHIN BAND

- Uses an adjustable elastic shin band.
- One mega ohm resistor is molded into the snap for safety.
- **Resistivity:** 10^6 Ω

Part No	1-9	10+
03UCHG3	$7.95	$6.50

ANTI-STATIC TOUCH PAD

- **Ideal for Keyboards**
- Pad has 1M ohm resistance
- Includes double sided tape install anywhere (keyboard etc.)

Part No.	1-9	10+
03ASTP	4.50	4.25

HIX CORPORATION

HEAT TRANSFER PRESSES

OPENS WIDER THAN SHOWN

In addition to using for creating circuit boards, these presses have many very popular uses. Create custom T-shirts, mouse pads, magnetic material, clipboards, dry erase boards, canvas, beverage insulators, placemats, calendars, puzzles, name badges, placques, sweatshirts, sport and golf bag tags, pennants, jeans, notebooks and more. Great for fund raisers and tournaments!

HOBBY LITE MODEL

- 9" x 12" flat, even-heat area
- Economical and perfectly suited for inkjet applications, sublimation and transfers
- Lightweight and portable. 23 lbs.
- Swing away design for easy layout away from heat
- Full range pressure control for items up to 1" thick
- Temp control from 0 – 400 F
- Heat indicator light, easy to use pressure lever and sturdy support base

SWINGMAN 15 MODEL

- 15" x 15" flat even-heat area
- Transfers items up to 1 " thick
- Temp control 0 – 450 F
- Full range pressure adjustment
- Indicator light goes off when set temp is attained
- Sturdy, but portable at 58 lbs.
- Applies all types of transfers. Great for laying out numbers and letters
- 120V, 12.5A, 1500W

B-250: CAP PRESS

- Turn caps into walking advertising for your customers, teams, and more!
- Lightweight and portable for use at malls, flea markets, shows, and more.
- Sturdy design with a strong support base.
- Interchangeable lower platen for ball, golf (standard), or youth caps.
- Features include pressure adjustment, 60 second auto-reset timer, thermostat (from off to 450 degrees F), heat indicating light, and handy cap holding device.

Part No.	Description	Price
03HOBBYLITE	Hobby Lite heat press 9" x 12"	$375.00
03SWINGMAN15	SwingMan 15 heat press 15" x 15"	720.000
03B250	Cap Press	640.00

Call for pricing on any other HIX products not listed here

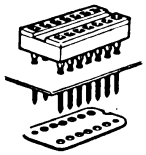
WIRE WRAP SOCKETS MACHINE TOOLED

3 LEVEL

Part No.	No. of Pins	1-9	10+
19ICW08-M	8	$0.65	$0.60
19ICW14-M	14	1.20	1.10
19ICW16-M	16	1.25	1.10
19ICW18-M	18	1.40	1.30
19ICW20-M	20	1.60	1.50
19ICW24-M	24	1.90	1.80
19ICW28-M	28	2.30	2.10
19ICW40-M	40	2.75	2.50

I.D. TAGS FOR WIRE WRAP SOCKETS

Part No.	Description	Prices
19ID20	20 Pin ID (05 pak)	3.50
19ID22	22 Pin ID (05 pak)	3.50
19ID24	24 Pin ID (05 pak)	3.75
19ID28	28 Pin ID (05 pak)	3.50
19ID40	40 Pin ID (05 pak)	8.95



Pomona Electronics BANANA JACKS

WITH WIRE WRAP TERMINALS

Part No.	Description	Color	1-9	10+
034005-0	Regular	Black	$2.95	$2.55
034005-2	Regular	Red	2.95	2.55
034022-0	Mini	Black	1.99	1.70
034022-2	Mini	Red	1.99	1.70

4005 **4022**

AC-ELECTRIC POWERED WIRE WRAP TOOL

The 120 Volt 6000 series electric wire wrapping and unwrapping tools have been designed for production and field service operations where wire sizes 18 to 32 AWG are used.

- Fast Operation
- Ergonomically Designed
- Lightweight Lexan Housing
- Unique Positive Indexing Mechanism
- Standard 20 Foot Power Cord
- 90 Day Warranty

Part No.	Description	Price
03SP6021	Wire Wrap Tool	$235.00
03BR224	22-24 AWG Bit	29.00
03S171	Sleeve For 22-24AWG Bit	14.50
03BR2426	24-26 AWG Bit	22.00
03S159	Sleeve For 24-26 AWG Bit	13.25
03BR30	30-32 AWG Bit	31.50
03S93	Sleeve For 30-32 AWG Bit	16.95

WIRE WRAP WIRE

30 AWG WIRE WRAP SOLID WIRE

Part No.	Color	Length	Prices
27001WWRD	Red	100'	$5.95
27003WWRD	Red	1,000'	38.00
27001WWBK	Black	100'	5.95
27003WWBK	Black	1,000'	38.00
27001WWOR	Orange	100'	5.95
27003WWOR	Orange	1,000'	38.00
27001WWBL	Blue	100'	5.95
27003WWBL	Blue	1,000'	38.00
27001WWBR	Brown	100'	5.95
27003WWBR	Brown	1,000'	38.00
27001WWGN	Green	100'	5.95
27003WWGN	Green	1,000'	38.00
27001WWYL	Yellow	100'	5.95
27003WWYL	Yellow	1,000'	38.00
27001WWGR	Gray	100'	5.95
27003WWGR	Gray	1,000'	38.00

WRAP / STRIP / UNWRAP TOOLS

Regular Wrap Tool

Modified Wrap Tool

- Regular and modified wrap models.
- 22 AWG, 24 AWG, 26 AWG, 30 AWG models.
- Color coded for various wrap sizes.

Part No.	Description	Price
03HSR30	Regular Wrap 30 AWG	$22.50
03HSR224	Regular Wrap, 22-24 AWG	22.95
03HSM24	Modified Wrap, 24 AWG	39.95
03HSM26	Modified Wrap, 26 AWG	39.95
03HSM30	Modified Wrap, 30 AWG	28.95

WIRE WRAP KIT

These complete telecom wire wrap tool kits are designed to provide field service with tools necessary to perform regular wraps, unwrapping and wire stripping in two different gauge sets – 22 and 24 or 24 and 26.

Kit Includes:

(1) Manual wire wrap gun
(1) Holster
(1) Wire Stripper
(1) Hand Wrap Tool
(1) Bit and Sleeve Set

Part No.	Description	Price
03KTW224	Wire Wrap Tool Kit – 22-24 AWG	$245.00
03KTW2426	Wire Wrap Tool Kit – 24-26 AWG	240.00

WIRE WRAP TOOL – ECONOMY MODEL

Strips, wrap and unwrap 30 Ga. wire.

Part No.	1-9	10+
03WTE	$12.75	$11.95

OK INDUSTRIES INC. WIRE WRAP TOOLS

WSU-30 Regular Wrap
WSU-30M Modified Wrap
(One Extra Turn of Insulated Wire)

Hand wrapping, stripping and unwrapping tools. Strips, wraps, and unwraps. For AWG 30 wire on .025" square post.

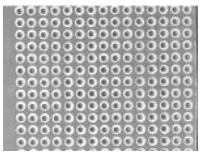
Part No.	1-9	10+
03WSU-30	$26.95	26.00
03WSU-30M	16.95	15.95

OK INDUSTRIES INC
WRAPPING AND UNWRAPPING TOOLS

Produce perfect wire wrapped connections. Precision, long-lasting tools for use where occasional wraps are required or where power wire-wrapping tools are not practical. Compact and convenient. Switch from wrapping to unwrapping simply by unscrewing the cap and reversing the shaft from one end to the other.

Part No.	Description	Price
03HWUW20	20 AWG	$79.00
03HWUW224	22-24 AWG	79.00
03HWUW26	26 AWG	79.00

PERF BOARDS



Ideal for prototyping work. .045" dia. holes on 0.1" center. 1/16" thick material (natural phenolic). No solder pads.

Part No.	Width & Length	No. of Holes	1-9	10-99
03013399	3" x 4"	29 x 40	$1.90	$1.70
03013404	4" x 6"	40 x 60	3.75	2.95
03013427	6" x 17"	59 x 169	8.50	7.50

VECTOR WIRE WRAP TERMINALS

Part No.	1-9	10+
2404T44	$13.50	$11.90
2404T49	15.90	14.95

Packed 100 pieces per bag

T44 T49

DATAK DRY CONCENTRATED ETCHANT

Anhydrous Ferric Chloride in vapor-tight package. The 1/4 lb. package produces 1 pint which will etch approx. 200 sq. inches of standard copper board.

Part No.	Description	1-11	12+
03ER3	1/4 lb.	$4.95	$4.75
03ER21	1 lb.	12.95	11.95

NEGATIVE PHOTO RESIST – ER-71

A liquid cinnimate resist in bottle with pump sprayer. May also be flowed on. The coated board is exposed to UV through a negative of the circuit pattern, then developed in ER-8 liquid. One bottle coats 1700 square inches.

Part No.	1-11	12+
03ER71	$9.50	$8.50

NEGATIVE RESIST DEVELOPER

A solvent blend that will develop ER-71 and other negative-acting photo resists. 16 oz.

Part No.	1-11	12+
03ER8	$5.50	$4.50

POSITIVE TYPE DEVELOPER CONCENTRATE

For developing Datak precoated PC boards. Developer is mixed 3 parts tap water to 1 part concentrate. Ten fully diluted ounces will develop between 12 and 22 square feet of precoated board (depending upon circuit density). This mild sodium hydroxide solution with additives may be flushed down drain after use.

Part No.	Description	Price
0312-402	2 Ounce Concentrate	$6.95
0312-404	4 Ounce Concentrate	13.90

DATAK TINNIT™ TIN PLATE

Tinnit™ will plate a copper clad board with a bright tin plate approx. .0004" thick. Enhances solderability, resists oxidation. Also use on card edge contact fingers. Supplied as a dry concentrate; just add water. One pint plates up to 600 sq. inches of copper. May be used to plate some other metals such as brass, bronze, iron; anything more active than tin. Plating is complete in about 10 minutes in a fresh solution, Tinnit™ is supplied as a dry mixture with indefinite shelf life. When mixed with water, the solution has approximately a 2 month life.

Part No.	Description	1-11	12+
03ER18	1 Pint Size	$6.50	$5.50
03ER181	1/2 Gallon Size	16.00	14.00

PC BOARD DESIGN AND FABRICATION KIT

This kit includes PCB layout software plus material and instructions to make your own printed circuit boards. No dark room processing needed.

Included in Kit:

- Board Creator Software
- Press-N-Peel image transfer film
- Etching solution
- Copper clad boards
- Software manual
- Complete instructions for making PC boards
- More than 100 hobby circuits on CD

Features of the Board Creator Software included in this kit

- Boards up to 10' x 8' up to 6 layers with 8 masks each
- Built-in print queue up to 10 masks
- User selectable cursor layout grid up to 1 mil resolution. Items not limited to grid
- Full surface mount device support
- Multiple line widths, from 0.001 to 0.255 inches wide
- Up to 10 different pad shapes and sizes
- Locates and displays errors on-screen

Part No. 32AMSPCBDFKIT • Price: $145.00

ETCHING SOLUTION HEATER

Fits in tank and heats solution up to 100 F (38 C). Used to further reduce etching time. Built-in adjustable thermostat controls temperature continuously to 100 F (38 C). 120V AC / 100 W Max.

Part No. 03ESH • Price: $19.95

DATAK POWER ETCH PUMP

The etch pump and distributor tubing may be used to accelerate etching and free you from some of the constant agitating of the etch solution. Bubbles provide both agitation and also some oxygen which enhances the process.

Part No.	1-11	12+
03ER12	$9.95	$8.95

®M.G. Chemicals EXPOSURE KIT

Includes major components needed to expose presensitized copper-clad boards. Comes complete with stand, light fixuture and exposure tube.

Part No.	Description	Price
03416X	Exposure Kit	$47.95
03416B	Replacement Exposure Bulb	7.95

DATAK DIRECT ETCH RESIST PEN

This pen is filled with a lacquer ink that is impervious to aqueous PC etch solutions. Ideal for photo resist pattern touch-up or for direct-etched boards with tight spaces.

Part No.	1-11	12+
03ER15	$1.95	$1.85

COPY AND REVERSING KIT

Gives you the capability to copy a circuit pattern from a textbook or magazine with the copy film and reverse the pattern with the reversing film. Copy film works with all plain paper copiers.

Reversing film requires no darkroom, tank, trays or fixers.

Kit includes:

- 1 — 8½" x 11" sheet of copy film
- 1 — 10" x 24" piece of reversing film
- 1 — 1 oz. developing solution,
- Sponge
- Instructions

Part No. 03CR705 • Price $11.95

®M.G. Chemicals PHOTOFABRICATION KIT

- Produce professional PC boards
- Develops presensitized copper boards which have been through the exposure process
- Includes
  - — (3) single sided, presensitized copper boards (3" x 5", 4" x 6" and 6" x 6")
  - — Developer (500 ml)
  - — Development tray
  - — Ferric chloride (500 ml)
  - — Rubber gloves
  - — (2) foam brushes
  - — Instruction sheet

Part No.	Description	Price
03416K	Photofabrication Kit	$41.50
03416X	Optional Exposure Kit	47.95
03416B	Replacement Exposure Bulb	8.90

®M.G. Chemicals

ETCHING PROCESS KIT

MODEL 416-E

Complete with tank, heater and pump. Etches copper clad circuits professionally. Accommodates two 8" x 12" double sided boards.

- 7 litre heavy duty polyethylene etching tank
- Sturdy mounting bracket
- Clear acrylic lid
- Heavy duty air pump
- 3-way adjustable airline manifold
- Triple line sparging unit
- 200 watt side mounting immersion heater with quartz element and adjustable temperature control
- Adhesive digital thermometer
- Bag of vinyl gloves
- Complete instructions

Part No. 03416E • Price: $195.00

PRESS-N-PEEL

Printed circuit board transfer film. Works with plain paper copiers and laser printers. Eliminates darkrooms, chemicals, negatives and copy cameras. Make PC Boards from CAD or magazines.

4 EASY STEPS:

1. Print or Copy Layout
2. Iron On
3. Peel Off (**PNP-Blue)**
   Soak Off **(PNP-Wet)**
4. Etch

PNP-Blue: For high precision, professional layouts. Adds extra layer of resist for super fine lines (<5 mil) and solid ground planes on single and double sided copper clad.

PNP-Wet: Easy, hobby quality PCB's. Transfers printer or copier toner as resist to single and double sided copper clad

Part No.	Description	Price
03PNPB5	PNP Blue 5 Sheet Hobby Pack	$9.90
03PNPW5	PNP Wet 5 Sheet Hobby Pack	9.90
03PNPB20	PNP Blue 20 Sheet Pro Pack	28.95
03PNPW20	PNP Wet 20 Sheet Pro Pack	28.95
03PNPB40	PNP Blue 40 Sheet Super Pack	55.00
03PNPW40	PNP Wet 40 Sheet Super Pack	55.00
03PNPB100	PNP Blue 100 Sheet Pack	119.00
03PNPW100	PNP Wet 100 Sheet Pack	119.00

PC BOARD ETCHING TANK SYSTEM

The PCB Etching Tank System is easy to assemble and use. Create PCB etchings in under 5 minutes. The tank features graduated markings to assist in setting correct etchant depth. Normal usage requires a minimum of 2,000cc (2 litres) to a maximum of 2,300cc (2.3 litres) of etching solution. Included are handy wire clips used to hang your boards in the tank. This feature makes it easy to lift the board out for an easy, quick check on the board's progress. Or, view the board in the translucent tank by shining a light on it during the process.

KIT CONTAINS:

- Molded plastic tank construction in high impact plastic
- Plug-in heater to heat ferric chloride or etching chemical
- 120V agitating air pump
- Wire circuit board holders that hold the board during etching and assist in handling
- Graduated markings on tank for proportions
- Typical 4 minute time to remove copper

Part No: 03ETPCB • Price: $82.50

DRAFTING FILM FOR PC ARTWORK

A polyester base general purpose drafting film. One side is matte to accept pencil or ink. Used to make original PC art masters.

Part No.	Description	1-11	12+
03MS21	2 sheets 8½" x 11"	$2.95	$2.50

®M.G. Chemicals

LIQUID FERRIC CHLORIDE

Fast and effective etching solution. Liquid, ready to use. Pour into a tray or into an etching tank and immerse your developed board.

Part No.	Description	Price
03151L	1 Litre (35 oz.) Liquid Ferric Chloride	$11.90
034154L	4 Litre (1 Gal.) Liquid Ferric Chloride	39.90

®M.G. Chemicals

POSITIVE PHOTO RESIST DEVELOPER

Highly concentrated. Dilute one part developer to ten parts tap water. For use with MG Chemicals 600 series or other positive presensitized boards. 500 ml (17 oz.) liquid.

Part No. 03418500ML • Price: $8.70

®M.G. Chemicals

LASER TRANSPARENCY FILM SHEETS

8 1/2" x 11" heat stabilized film sheets for use with most laser printers to produce artwork for photofabrication process. 300 DPI or greater laser printer or trace pen required. 5 sheet pack.

Part No.	1-9	10+
03MG416T	$8.50	$7.40

®M.G. Chemicals

HEAVY DUTY CLEANER DEGREASER

Cleans and degreases contacts, connectors, printed circuits, relays, tuners, switches and controls.

- Static free
- No residue
- Non flammable
- Non conductive
- Displaces moisture
- Superior penetration
- Very fast evaporation
- Contains HCFC 141B solvent
- Does not contain chlorides
- Dissolves: Wax, tars, and adhesives
- Removes: Oils, lubricants and oxides
- Variable valve allows user to control rate of flow
- Works excellently in vapor degreasers and ultrasonics
- Does not contain any Class 1 ozone depleting substances

Part No.	Descr.	Price
25827A425	15 Oz Aerosol	$13.50

ULTRA VIOLET EXPOSURE FRAME

Detail

FEATURES:

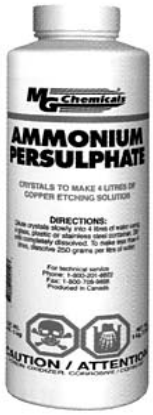
- Installed with self contained vacuum system.
- Double sided UV light source.
- Digital timer with re-expose function.
- Mask area: 220mm (8.6") x 370mm (14.5").
- Can be used for single or double sided boards

Used for professional exposure of photosensitive coatings. Vacuum system guarantees accurate positioning. Top and bottom lights can be controlled independently. **Power source:** 115 Vac; **Weight:** 30 lbs.

Part No: 03UVEF Price: $795.00

®M.G. Chemicals

AMMONIUM PERSULPHATE



1kg (2.2lb.) copper etchant. Ammonium Persulphate crystals are used as an alternative to traditional ferric chloride to produce a cleaner copper etchant solution. 1 kilogram of crystals produces 4 litres of etching solution. Excellent for situations where the visibility of the etching process is beneficial (instructional use).

Part No. 03410 • Price: $26.95

®M.G. Chemicals

FLUX REMOVER PEN – 11.5ML

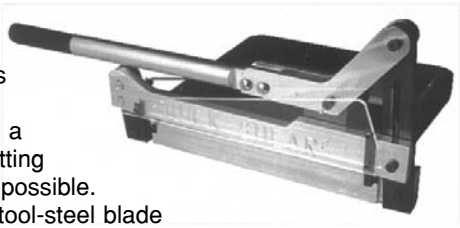
FOR PRECISION FLUX REMOVAL

Effectively removes organic rosin flux and ionic soils found in post solder applications.

- Safe on most plastics
- Pen tip allows controlled application
- Flammable
- Keep out of reach of children

Part No.	Description	Price
254140-P	11.5ml Felt Tip Pen	$6.50

PRECISION MULTI-6 SHEAR



Hand operated tool designed to cut circuit board laminates through .125" thick and sheet metal up to a thickness of .040". Cutting widths of 12.125" are possible. It utilizes a hardened tool-steel blade and requires a bench space of only 15" wide by 13" deep. It is supplied with transparent plastic blade guards, a precision machined side squaring gauge for accurate shearing.

Part No.	Description	Price
03MS6	Multi-6 Shear	$650.00

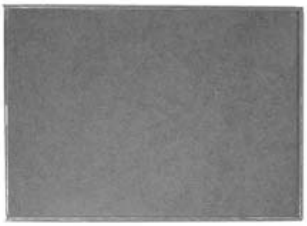
®M.G. Chemicals
PRINTED CIRCUIT BOARD ETCHING TANK

MODEL 416-ES

- Accommodates two 8" x 9" 2-sided boards
- Inexpensive – Great for students
- 5 litre
- Etching tank and lid
- Air hose
- Air pump
- Sparging unit
- Latex gloves
- Complete instructions

Part No.	Price
03416ES	$52.95

DATAK
CONTACT EXPOSURE FRAMES



A contact frame is needed to hold films during exposure. Large format spring-loaded ER-10 steel contact frame will accept 8.5" x 11" artwork originals, photocopy film and sensitized printed circuit boards. Smaller frame is ideal for hobby projects. Both frames come complete with glass, backboard, yellow POS-NEG filter and instruction manual.

Part No.	Description	1-11	12+
03ER10	9" x 12" Exposure Frame	$23.50	$22.50
03ER56	5" x 6" Exposure Frame	14.25	13.25

DATAK
SPECIAL LIGHT BULB

PHOTOFLOOD BULB FOR POS-NEG

Part No.	1-11	12+
03ER2000	$12.50	$11.00

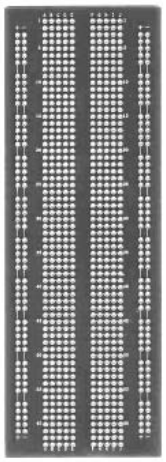
AUTOMATED PROTOTYPING
3D MILLING MACHINE

The Roland SRM-20 MonoFab is a Roland Newest Desktop Subtractive Rapid Prototyping (SRP) system capable of 3D milling, 2D Milling, and Engraving. The SRM-20 is ideal for a variety of product designs tasks, including model making, rapid prototyping, and small lot production.

The SRM-20's compact design makes it a perfect fit for offices and classrooms. Add some of PDI exclusive accessories and the SRM-20 is transformed into a PC Board Prototype System, an Engraver, a Jewelry Wax Carving system.

Part No. 01SRM20 • Price: $5395.00

PC PROTOBOARD
MATCH FOR 830PT BREADBOARD



This PC board is the exact duplicate of the 830pt Solderless Breadboard (03MB102). It makes it easy to transfer circuits from breadboard to this PC Board for more permanently wired circuit.

Size 6.6" x 2.3"
All holes are .04"

Part No.	Description	1-9	10+
0302PCMB	PC Protoboard	$4.50	$3.50

adafruit BREADBOARD PCB

Half Size

Full Size

The top side has a white silkscreen, and the same markings you're familiar with, to make transferring components easy. The bottom has the 5-hole pad design that matches a classic breadboard, with 4 power bus lines on the sides, and no mask so you can easily cut traces when necessary. All holes are thru-plated for strength - these won't peel off with rework.

Part No.	Description	Price
03AD590	Full Size (830 tie points	$19.90
03AD571	Half size (400 tie points	12.50

GLUE GUNS

- Electronic heating system
- Automatic trigger action

Part No.	Description	Price
90STLGR10	Glue Gun Mini Hot Melt by Stanley	$3.00
90STLGS10DT	Glue Sticks for GR10, 24Pk	2.40
90TA0288	Glue Gun Mini Cool Tool	12.85
90TA3415	Glue Sticks for TA0288, 15Pk	2.29
90TA0280	Glue Gun Hybrid Cordless Multi Temp	20.50
90TA0443	GLue Gun Full Size 2-Temp Cordless	8.30
90TA3410	Glue Sticks for Mini for TA0280 10Pk	0.91
90TA1110	Glue Sticks 10" for Multi Temp For TA0443	2.59
90TA22914ZIP	Glue Stick 4" High Temp for TA0443, 30Pk	3.40

CONDUCTIVE WIRE GLUE

REPLACE SOLDER WITH GLUE

Wire Glue utilizes the latest advances in microcarbon technology to bring you a highly conductive glue at a fraction the price of competitive products which use precious metals. Each jar contains 0.3 oz. fl. of Wire Glue

Features
- Lead Free
- Simple: One Easy Step
- Reliable: Permanent Bond
- Highly Conductive
- For Both AC and DC Circuits
- Quick and Easy Repairs

Applications
- Surface Mount
- Computer Repair
- Flex Boards
- Connector Repair
- Solar Cell Leads
- RF Shielding

Part No. 03WIREGLUE • Price: $3.90

3M SCOTCH-WELD GEL INSTANT ADHESIVE CA-50

- High strength cyanoacrylate adhesive.
- Ideal for difficult to bond surfaces.
- Gel can be used in non-sag vertical applications.
- Can fill gaps up to .02"
- Slow cure rate allows for repositioning.

Part No.	1-9	10+
03AD2	$28.05	$27.05

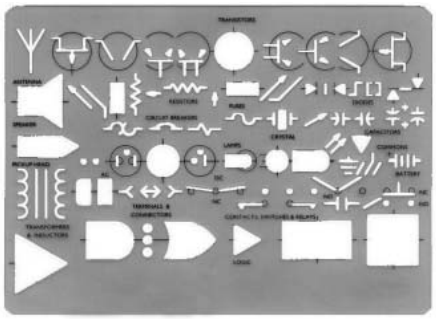
®M.G. Chemicals EPOXY SUPER STRENGTH

- Fast set super strength
- Strength: 1500psi
- Materials: Paper, wood, metal, ceramic
- Snap out paddle
- Reseals for storage
- Net volume 25ml

Part No.	1-9	10+
038332-25	$7.95	$7.50

TEMPLATES

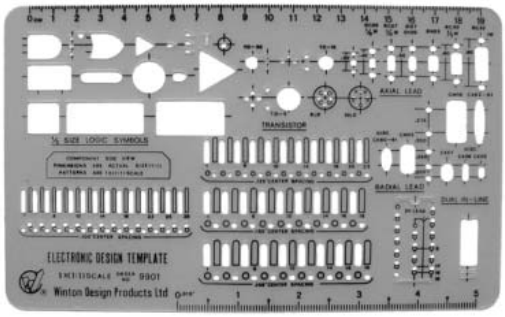
ELECTRICAL / ELECTRONICS



Contains: resistors, capacitors, circuit breakers, relays, switches, electronic tube, logic symbols. Conforms to ANSI Y32.2 and IEEE 315. Designed for .20" grid.

Part No.	1-9	10+
0302TPES	$5.95	$4.95

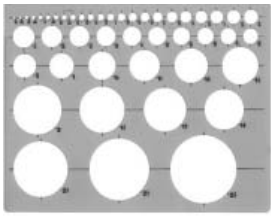
ELECTRONIC DESIGN TEMPLATE



Includes symbols, components and center space layouts

Part No.	Description	1-9	10+
0302TPEDT1	1:1 Scale Template	$5.50	$4.50

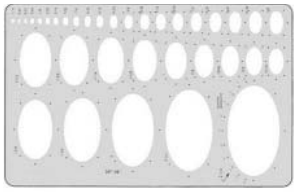
CIRCLE GUIDE



Contains: forty-six circles with centering lines. Size range – $1/16$" to $2\frac{3}{4}$". Size: $8\frac{3}{4}$" x $11\frac{1}{4}$" x .03".

Part No.	1-9	10+
0302TPD4000	$7.75	$7.00

ISOMETRIC ELLIPSES



Size Range: 1/3" to 2"
Size: 6" x 9" x .03"

Part No.	1-9	10+
0302PW1713	$3.95	$3.50

COPPER CLAD CIRCUIT BOARDS

Best Seller!

CEM-1 MATERIAL, 1/16", 1 OZ. COPPER

Part No.	Description	1-9	10+
97BS11	3" x 4"; single side	$0.95	$0.90
97BS12	5" x 6"; single side	1.95	1.80
97BS13	9" x 12"; single side	6.50	5.95
97BS14	24" x 36"; single side	33.95	31.95

FR-4 (FIBER GLASS), 1/16" THICK, 1 OZ. COPPER

Part No.	Description	1-9	10+
97BS15	3" x 4" Single Sided	$1.35	$1.15
97BS16	5" x 6" Single Sided	2.95	2.80
97BS17	9" x 12 Single Sided	7.90	7.25
97BD11	3" x 4" Double Sided	1.75	1.50
97BD12	5" x 6" Double Sided	3.95	3.50
97BD13	9" x 12" Double Sided	8.25	7.70

PRE-SENSITIZED POSITIVE

PHOTO RESIST PRINTED CIRCUIT BOARDS

- Ideal for small production runs.
- Highly sensitive positive resist coated on copper foil.
- Can go direct from artwork. No need to reverse artwork.
- Fiberglass substrate; 1 oz. copper foil.
- To develop use pos. type developer 0312-402

Part No.	Description	Price
03PSPB1	3.9" x 5.9"-singleside	$7.50
03PSPB2	4.5" x 6.5"-singleside	7.95
03PSPB3	4.5" x 6.5"-doubleside	7.95

®M.G. Chemicals

SILVER CONDUCTIVE PEN

- Excellent for repairing and modifying printed circuits and EMI/RFI shielding applications.
- Silver pigment provides excellent corrosion resistance.
- Quick drying, convenient pen applicator for precision work.
- Resistivity 0.2 ohm-mil.

Part No.	Price
03SCP	$26.00

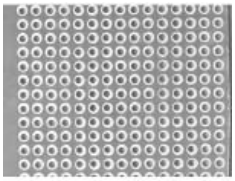
®M.G. Chemicals

GREEN CONFORMAL OVERCOAT PEN

- Protects printed circuit boards against moisture, corrosion and thermal shock.
- Protects and insulates electrical and electronic components and assemblies.
- Clear tough protective coating.
- Protects against static discharge.
- Service temperature limits: 65 C

Part No.	1-9	10+
03GCOP	$8.50	$7.95

PERF BOARDS



Ideal for prototyping work. .045" dia. holes on 0.1" center. 1/16" thick material (natural phenolic). No solder pads.

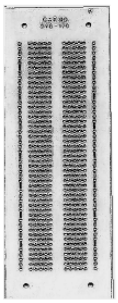
Part No.	Width & Length	No. of Holes	1-9	10-99
03013399	3" x 4"	29 x 40	$1.90	$1.70
03013404	4" x 6"	40 x 60	3.75	2.95
03013427	6" x 17"	59 x 169	8.50	7.50

PROTOTYPING BOARD

MODEL NO. PB-10

(6" X 2 1/8")

Printed circuit board with layout matching solderless breadboard MB102. Features a total of 550 predrilled indexed connect points.



PB-10

Part No.	1-9	10+
0302PB10	$3.25	$2.65

VECTOR WIRE WRAP TERMINALS

Packed 100 pieces per bag

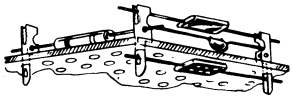
Part No.	1-9	10+
2404T44	$13.50	$11.90
2404T49	15.90	14.95

T44 T49

MICRO TERMINALS

10 PER PAK

Easily press-fit into a .042 dia. hole.



Part No.	Description	1-9	10+
24041495-10	Terminal	$0.90	$0.80
24041322	Insertion Tool	4.45	3.95

RSR BANANA TO BANANA 6PC SET

- Stackable type 36" long
- **Colors:** Red, Black, White, Blue, Green, and Yellow

Part No. 05BNTOBN6 • Price: $11.95

AUDIO CABLES

Figure 1

Figure 2

Figure 3

Figure 4

Figure 5

Figure 6

Figure 7

Figure 8

Figure 9

Part No.	Description	Fig	1-9	10+
05RS1	RCA Stereo (2)M to (2)M; 3 ft	1	$1.75	$1.65
05RS2	RCA Stereo (2)M to (2)M; 6 ft	1	2.25	2.15
05RS3	RCA Stereo (2)M to (2)M; 12ft	1	3.50	3.20
05RMM1	RCA M to M plug; 3 ft	2	1.25	0.95
05RMM2	RCA M to M plug; 6 ft	2	1.50	1.25
05RMM3	RCA M to M plug; 12 ft	2	2.25	2.10
05RMF1	RCA M to F plug; 3 ft	3	1.25	0.95
05RMF2	RCA M to F plug; 6 ft	3	1.50	1.25
05MM1	3.5mm(1/8") Mono M to 3.5mm Mono M;6 ft	4	1.35	1.15
05MM2	3.5mm(1/8") Stereo M to 3.5mm Stereo M;6 ft.	4	1.50	1.30
05MM3	3.5mm(1/8") Stereo M to 3.5mm Stereo F;6 ft.	5	2.45	2.25
05YR1	Y Adaptor RCA F to 2-RCA M; 6"	6	1.50	1.30
05YR2	Y Adaptor RCA M to 2-RCA F; 6"	7	1.50	1.30
05YR3	Y Adaptor RCA M to 2-RCA M; 6"	8	1.50	1.30
05YR4	Y Adaptor 3.5mm stereo M to 2-RCA F; 6"	9	1.75	1.50

BANANA TO BANANA LEAD SET

HIGH IMPACT STACKABLE TYPE

Wire Length 36"

Part No.	Color	1-9	10+
05ALS19	Red	$2.20	$1.95
05ALS12	Black	2.20	1.95
05ALS13	Yellow	2.20	1.95
05ALS14	Green	2.20	1.95
05ALS16	White	2.20	1.95
05ALS17	Blue	2.20	1.95

TEST LEAD BONANZA

CONTAINS 7 MOST POPULAR TEST LEADS

05ALS1

05ALS3

05ALS5

05ALS7

05SPAK110

05SPAT1

05SPAT2

A 25% savings over our already low every-day pricing. Fantastic assortment of our most popular types of test leads . Perfect for the classroom or workbench at home or shop. Commonly used leads that everybody, no matter how careful, eventually needs replacement. Conveniently packaged in a nice, white box.

- 05SPAT2 - BNC to Alligator, 36"
- 05SPAT1 - BNC-to IC Test Hook, 36"
- 05ALS5 - Banana-to-IC test Hook, Red and Black
- 05SPAK110 - 60MHz Scope Probe Set
- 05ALS3 - Banana-to-Alligator, Red and Black, 36"
- 05ALS7 - 5 Color Set of Mini Hook-to-Mini Hook
- 05ALS1 - 10 Sets Alligator-to-Alligator, Different Colors, 20"

Part No.	Description	Price
3200TLK1	7 Set Test Lead Assortment	$29.95

RSR BANANA TO ALLIGATOR LEAD SET

(1 EA. OF RED & BLACK)

Banana to alligator leads, 18-gauge test lead wire, red & black, 36" long

05ALS3

05ALS8

Part No.	Descr.	1-9	10+
05ALS3	18 AWG Wires	$2.75	$2.50
05ALS8	Coax Cable	3.75	3.50

RSR BANANA TO BANANA TEST LEAD SET

(1 EA. OF RED & BLACK)

Banana to banana leads, 18-gauge test lead wire, red & black.

Part No.	Descr.	1-9	10+
05ALS4	36"	$2.95	$2.75
05ALS9	24"	2.75	2.50
05ALS15	60"	4.75	4.25
05ALS32*	36"	4.95	4.75

(*deluxe version)

RSR BANANA TO MINI GRABBER LEAD SET

(1 EA. OF RED & BLACK)

20-gauge test lead wire, red & black, 36" long

Part No.	1-9	10+
05ALS5	$3.50	$2.95
05ALS30*	5.50	4.95

(*deluxe version)

RSR MINI GRABBER TO MINI GRABBER LEAD SET

(1 EA. OF RED & BLACK)

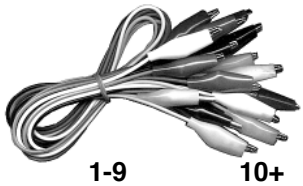
20-gauge test lead wire, red & black, 36" long.

Part No.	1-9	10-+
05ALS6	$2.75	$2.50
05ALS31*	5.90	5.40

(*deluxe version)

RSR ALLIGATOR LEAD SETS

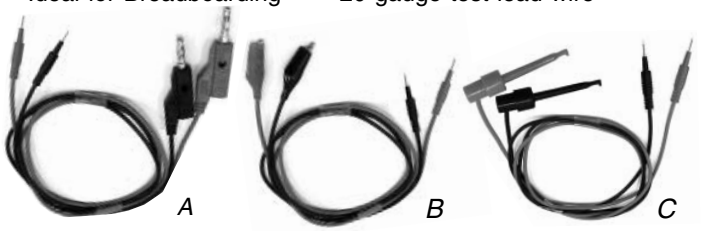
Standard duty, 20" long, color-coded leads with insulated alligator clips at each end. Alligator clips are crimped and **soldered** to the leads for greater reliability.



Part No.	Description	1-9	10+
05ALS1A	Set of 2 Leads (red & black)	$1.10	$0.95
05ALS1	Set of 10 Leads	3.65	3.25
05ALS2	Set of 10 Leads, Heavy Duty	4.50	4.25

RSR TEST PIN LEADS

- Ideal for Breadboarding
- 20 gauge test lead wire

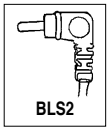


A *B* *C*

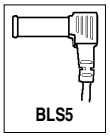
Part No.	Description	Fig	1-9	10+
05ALS22	Banana to Test Pin 36" Set	A	$3.75	$3.25
05ALS23	Alligator to Test Pin 24" Set	B	1.50	1.20
05ALS24	MiniGrabber to Test Pin 24" Set	C	2.50	2.25

RSR BANANA TO TEST PROBE

(1 EA. OF RED & BLACK)



BLS2



BLS5

Part No.	Description	1-9	10+
05BLS2	For Regular Jack	$2.40	$1.85
05BLS5	For Recessed Jack	2.40	1.85
05BLS6	For Recessed Jack Plus 2 Detachable Alligator Clips	2.95	2.75

RSR MINI GRABBER LEAD SET

5 COLOR SET INCLUDES ONE EACH OF RED, BLACK, YELLOW, GREEN AND WHITE

5 color coded, 16" test leads with minigrabbers hook-on probes at both ends. Set includes one each red, black, yellow, green, white.

Part No.	1-9	10+
05ALS7	$6.95	$6.25

TEST LEADS

RSR BANANA TO ALLIGATOR LEAD SET

(1 EA. OF RED & BLACK)

Banana to alligator leads, 18-gauge test lead wire, red & black, 36" long

Part No.	Descr.	1-9	10+
05ALS8	Coax Cable	$3.75	$3.50

Pomona Electronics TEST LEAD KIT

MAXI-KIT

Kit contains 2 ea.: Extendable Tip Probe Leads, Replaceable Tip Probe Handles, Pop Jack Leads, Couplers, Alligator Clips (medium & heavy duty), Mini-grabber Leads, Minipincer Leads, Slide-on IC Tips, 2-Spade Lugs, Dog Leg Micro Tips, Needle Tips, Shouldered Micro Tips & 4 ea. Brass Tips and a nylon pouch.

Part No.	1-9	10+
05TL5677A	$93.75	$91.75

Pomona Electronics SMD MULTI-USE TEST KIT

This makes it easier testing small surface-mount devices. Kit includes: Mini and micro SMD grabber, test clips (4), clip lead for micro SMD grabber, bench-top DMM modular test leads, stacking 2mm safety patch cords, SMD test probe with sharp-spring mounted tips, 4mm banana plug to 2mm banana jack adapters, mini-alligator clips with 2mm jack.

Part No. 0572928 • Price: $119.95

Pomona Electronics SMD TEST TWEEZER LEADS

Fig. A

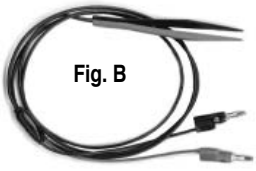


Fig. B

Part No.	Fig.	Description	1-9	10+
05TL5142	A	Test Tweezer to BNC Male	$26.95	$25.95
05TL5143	B	Test Tweezer to Stacking Banana Plugs	23.95	22.95

RSR ALLIGATOR LEAD SETS

Standard duty, 20" long, color-coded leads with insulated alligator clips at each end. Alligator clips are crimped and **soldered** to the leads for greater reliability.

Part No.	Description	1-9	10+
05ALS1A	Set of 2 Leads (red & black)	$1.10	$0.95
05ALS1	Set of 10 Leads	3.65	3.25
05ALS2	Set of 10 Leads, Heavy Duty	4.50	4.25

BNC CABLES

BNC MALE TO BNC MALE

Part No.	Length	Impedance	1-9	10+
05BNC603	3'	75 ohm	$3.50	$2.95
05BNC606	6'	75 ohm	3.95	3.50
05BNC612	12'	75 ohm	4.95	4.75
05BNC625	25'	75 ohm	7.60	6.85
05BNC60350	3'	50 ohm	4.25	3.50
05BNC60650	6'	50 ohm	4.50	3.95
05BNC61050	10'	50 ohm	4.00	3.00
05BNC61250	12'	50 ohm	6.00	5.00
05BNC62550	25'	50 ohm	10.50	9.95

VIDEO CABLES

WITH F CONNECTORS – F-59 TO F-59

• Deluxe • Standard 75 ohm • With Strain Relief

Part No.	Description	Length	1-9	10+
05F603	RG59 Cable	3'	$2.20	$1.75
05F606	RG59 Cable	6'	2.50	2.25
05F612	RG59 Cable	12'	3.25	2.95
05FFPB63	RG6 Cable	3'	1.95	1.65
05FFPB66	RG6 Cable	6'	2.25	2.10
05FFPB612	RG 6 Cable	12'	3.95	3.70

RCA TO RCA

• Deluxe "Gold Ends" • Standard 75 ohm • With Strain Relief

Part No.	Length	1-9	10+
05RCA603	3'	$2.40	$2.20
05RCA606	6'	3.50	2.95
05RCA612	12'	3.75	3.50

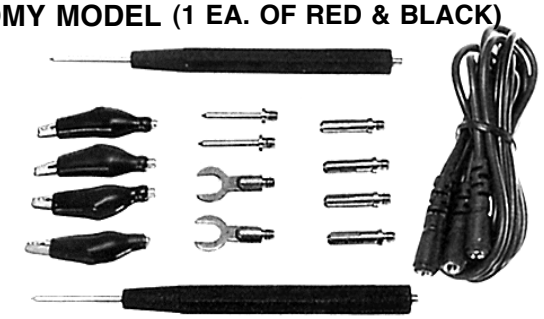
DIGITAL READY PREMIUM AUDIO CABLES

- 24K gold plated RCA connectors.
- 2 cables, RCA to RCA.
- 99.9% oxygen free copper cable.
- Premium shielding protects against interference.

Part No.	Length	1-9	10+
05KK2RAV03	3'	$4.95	$4.50
05KK2RAV06	6'	8.95	8.70

RSR UNIVERSAL TEST LEAD KIT

ECONOMY MODEL (1 EA. OF RED & BLACK)



Part No.	1-9	10+
05YT1649	$5.25	$4.75

Pomona Electronics TEST LEADS

STANDARD REPLACEMENT

Kit contains 2 Test Probes, PVC Leads, one black and one red.

Part No.	Description	1-9	10+
05TLRP5519	Beckman, Fluke & most B&K	13.90	12.90

Pomona Electronics TEST LEAD KIT

BENCH DMM

Kit contains 2 pcs. each: Probe Handles (Set 5906), Straight Plug Test Leads (Set 5908) Flexible Maxigrabber Clips (Set 5910), and Medium Alligator Clips (). It also contains 2 Spade Lugs. It comes with a nylon pouch.

Part No.	1-9	10+
05TL5901	$56.90	$54.90

RSR BNC TEST LEADS ECONOMY

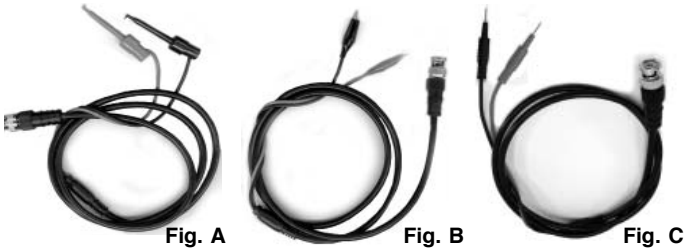


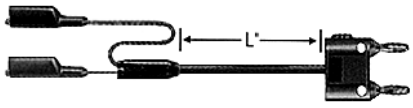
Fig. A Fig. B Fig. C

36" long, coax cable, BNC to Alligator or BNC to IC Test Hook.

Part No.	Fig.	Description	1-9	10+
05SPAT1	A	BNC to IC Test Hook 36" long coax & 8" long connecting wires	$3.75	$3.25
05SPAT4	A	BNC to IC Test Hook 60" long coax & 18" long connecting wires	4.50	4.25
05SPAT2	B	BNC to Alligator - 36" long coax & 18" long Red/Black connecting wires	3.25	2.95
05SPAT5	B	BNC to Alligator - 60" long coax & 18" long Red/Black connecting wires	4.25	3.95
05SPAT6	C	BNC to Test Pin - 36" long coax & 8" long wires	3.50	3.25

RSR DUAL BANANA TO ALLIGATOR SET

Dual banana to alligator lead set. RG58A/U coax cable. 36" long.



Part No.	1-9	10+
05DBA	$3.25	$3.00

BK PRECISION SHEATHED TEST LEAD SET

MODEL TL 1

Economical replacement test leads. TL-1 has safety shrouded banana plugs and alligator clips.

Part No. 01BKTL1 • Price $7.95

Pomona Electronics SQUARE PIN JACK TO BANANA PLUG

22AWG wire

Part No.	Description	Price
054771-36-0	Black / 36" Long	$6.25
054771-36-1	Red / 36" Long	6.25

TEST LEADS

RSR PORTABLE TEST LEAD HOLDER

This probe-leads stand can be moved in all directions. 4 rails, 260 mm long.

- Holder-rollers and container
- 5 multidirectional castors
- Storage container
- Holder hook lines
- Suitable for classrooms and laboratories
- Can hold 125+ leads

Part No. 05PTLH • Price: $98.00

Pomona Electronics TEST LEAD HOLDER

WALL MOUNT – ALUMINUM

Part No.	Color	Max. Cable Dia.	No. of Slots	1-9	10+
05TLH2708	Blue	.45"	9	$12.95	$11.95
05TLH4408	Black	.32"	10	10.90	10.50
05TLH1508	Orange	.21"	14	12.95	11.95

RSR BNC TEST LEADS ECONOMY

36" long, coax cable, BNC to Alligator or BNC to IC Test Hook.

Fig. A

Fig. B

Part No.	Fig.	Description	1-9	10+
05SPAT1	A	BNC to IC Test Hook 36" long coax & 8" long connecting (Red & Blk.) wires	$3.75	$3.25
05SPAT4	A	BNC to IC Test Hook 60" long coax & 18" long connecting wires	4.50	4.25
05SPAT2	B	BNC to Alligators - 36" long coax & 8" long connecting (Red & Blk.) wires	3.25	2.95
05SPAT5	B	BNC to Alligator - 60" long coax & 8" long connecting (Red & Blk.) wires	4.25	3.95

RSR TEST LEAD HOLDER

- 50 leads maximum
- 2 rows for large leads (BNC)
- 2 rows for small leads (2mm)
- 9 rows for standrd leads (4mm)

WALL MOUNT

Part No.	1-9	10+
05TLH1	$8.95	$7.95

TEST LEADS FROM POMONA AND EZ-HOOK

SUPERIOR QUALITY – MADE IN THE U.S.A.

Fig. A

Fig. C

Fig. E

Fig. G, H

Fig. I

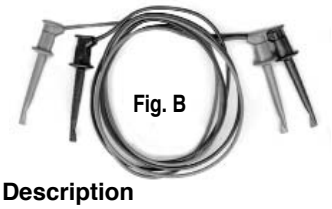


Fig. B

Fig. D

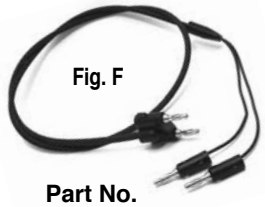


Fig. F

Description	Part No.	Manufacturer	1-9	10+
A) Banana to Mini Grabber Set Stacking banana to mini grabber hook 36" long, 1 each red & black.	053782	Pomona	$12.90	$12.45
B) Mini Hook to Mini Hook Set Mini grabber to mini grabber jumper 36" long, 1 each red & black.	053781	Pomona	9.50	8.95
C) Banana to Banana Lead Set Stacking banana to stacking banana. 36" long, 1 each red & black.	05B36	Pomona	10.45	10.05
D) Dual Banana to BNC Set Dual banana to BNC. RG 58 C/U. 36" long.	052BC-BNC-36	Pomona	16.95	14.95
E) BNC to BNC BNC to BNC cable. 36" long. RG 58	055697-36	Pomona	7.95	6.95
F) Dual Banana to Banana Plugs	051368A-36	Pomona	23.95	22.75
G) Dual Banana to Alligator Set Dual banana to mini alligator. RG174/U. Coax. 36" long.	054059M-36	EZ-HOOK	17.90	16.90
H) Dual Banana to Alligator Set Dual banana to mini alligator. RG58A/U. Coax. 36" long.	05EZ1059-36	EZ-HOOK	14.95	13.95
I) Scope Probe	05SP1020-48	EZ-HOOK	17.90	17.25

RSR SCOPE PROBE

SWITCHABLE
100 MHZ / 250 MHZ

B.W. DC to 100/250 MHz. BNC to IC Test Hook, with selectable X1, X10 switch. Includes 1 ea. probe, spring hook, ground lead, insulating tip, measuring tip, IC tip, adjusting tool, channel identifier clip, BNC adaptor.

Part No.	Description	1-9	10-99	100+
05SPAK510	100 MHz	$17.95	$15.95	$13.95
05SPGL250	250 MHz	21.95	19.95	17.95

RSR SCOPE PROBE

SWITCHABLE
100 MHZ DELUXE
U.S.A. MADE

- B.W.: DC to 100 MHz
- Compensation Range: 10pf to 60pf
- Overshoot: < 3%
- Input Cap: 45pf 10% (1:1); 11pf 2pf (10:1)

Included 1 ea. probe, spring hook, ground lead, trimming tool, insulating tip, I.C. tip, BNC adapter.

Part No.	1-9	10+
05SPAK722	$25.90	$23.90

RSR SCOPE PROBE

WITH READOUT PIN
350 MHZ / 500 MHZ
COMPATIBLE WITH TEKTRONIX® AND AGILENT® SCOPES

- Fixed x10 attenuation with readout actuator pin
- Rise time 1.0 ns (350 MHz) / 0.7 ns (500 MHz)
- 10-35 pf compensation range (350 MHz) / 8–16 pf (500 MHz)
- Cable length 1.2 meter

Part No.	Description	Price
05SP6351R	Compatible with Tektronix® (350 MHz)	$36.95
05SP6651R	Compatible with Agilent® (350 MHz)	36.95
05SP6501R	Compatible with Tektronix® (500 MHz)	75.00

RSR SCOPE PROBE

SWITCHABLE
60 MHZ

B.W. DC to 60 MHz. BNC to IC Test Hook, with selectable X1, X10 switch. Includes 1 ea. probe, spring hook, ground lead, insulating tip, measuring tip, IC tip, adjusting tool, channel identifier clips.

Part No.	1-9	10-99	100+
05SPAK220	$13.95	$11.95	$9.95

RSR SCOPE PROBE

SWITCHABLE
60MHZ

- Insulated BNC Connector
- BW → DC to 60MHz
- x1, x10 Selectable Switch
- Compensation Range → 15 to 50 pF

Includes 1 each probe, spring hook and ground lead.

Part No.	1-9	10-99	100+
05SPAK110	$13.95	$11.95	$8.95

RSR SCOPE PROBE

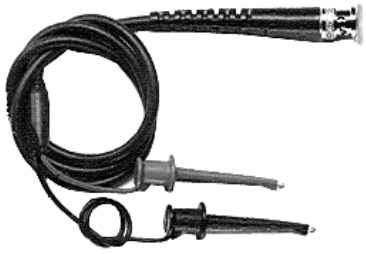
SWITCHABLE
60MHZ DELUXE
USA MADE

- BW → DC to 60MHz
- Compensation Range → 15pF to 40 pF
- Overshoot → < 3%
- Input Cap → 72pF (1:1); 17pF (10:1) 10%

Includes 1 each probe, spring hook, ground lead.

Part No.	1-9	10+
05SPAK330	$21.95	$18.95

Pomona Electronics BNC MALE TO MINIGRABBER®



MODEL 5187-C:
RG 58 C/U Cable

MODEL 5187-K
RG174 C/U Cable

Length	Model 5187-C		Model 5187-K	
	Part No	Price	Part No.	Price
24"	055187-C-24	$16.90	055187-K-24	$22.50
36"	055187-C-36	17.95	055187-K-36	23.95
48"	055187-C-48	16.95	055187-K-48	23.50
60"	055187-C-60	18.95	055187-K-60	23.50

DELUXE TEST LEAD AND ACCESSORY KIT

IN DURABLE, DIVIDED VELCRO POUCH

MODEL LD2 *(SCREW ON TYPE CONNECTIONS)*

KIT CONTAINS:

1 each red and black ***extra large insulated alligator clip set*** *(AL 10481)* with *screw-on* type receptacles. These clips mate with modular test probes (TL1052) or directly with 48" test leads (TL1054). 1KV Cat III 10A. Overall height – 3.8". Jaws open – 0.7"

1 each red and black ***modular test probes*** *(TL1052)* ***with two types removable tips.*** These probes also mate with alligator clips or flexible test leads. 1KV Cat III 10A. Four total tips included, one each red and black fine point and one each red and black notched tip.

1 each red and black ***IC hook test lead set*** *(TL1056)* which mate with flexible test leads. 1KV Cat III 10A.

1 each red and black ***48" flexible test leads*** *(TL1054)* with straight DMM plug on both ends. Mate with alligator clips, modular probes and IC test hook sets. Sheathed plugs fit most Fluke, Tektronix, HP, Wavetek, etc. meters. 1KV Cat III 10A.

1 ***three-way divided, heavy duty roll up pouch with see-thru compartments*** for easy visibility and access.

Part No.	Description	1-9	10+
05TLLD2	Screw-On Modular Test Lead Accessory Kit	$26.95	$21.95

DELUXE TEST LEAD AND ACCESSORY KIT

IN DURABLE, DIVIDED VELCRO POUCH

MODEL LD1 *(PUSH ON TYPE CONNECTIONS)*

KIT CONTAINS:

1 each red and black ***extra large insulated alligator clip set*** *(AL 10482)* with *sheathed* 4mm receptacles. These clips mate with modular test probes (TL1053) or directly with 48" test leads (TL1055). 1KV Cat III 10A. Overall height – 3.8". Jaws Open – 0.7"

1 each red and black ***modular test probes*** *(TL1053)* which mate with alligator clips or flexible test leads. 1KV Cat III 10A.

1 each red and black ***IC hook test lead set*** *(TL1056)* which mate with flexible test leads. 1KV Cat III 10A.

1 each red and black ***48" flexible test leads*** *(TL1055)* with straight DMM plug on one end and right angle on the other end. Mate with alligator clips, modular probes and IC test hook sets. Sheathed plugs fit most Fluke, Tektronix, HP, Wavetek, etc. meters. 1KV Cat III 10A.

1 ***three-way divided, heavy duty roll up pouch with see-thru compartments*** for easy visibility and access.

Part No.	Description	1-9	10+
05TLLD1	Push-On Modular Test Lead Accessory Kit	$24.95	$19.95

Pomona Electronics MINIGRABBER® TEST CLIP PATCH CORD SET

MODEL 5521: SMD Grabber® (jaws)
MODEL 5523: Test clip (hook)

- One each of 10 colors
- 24" leads with clips on both ends

Part No	1-9	10+
055521	$59.99	$55.95
055523	40.95	39.90

Pomona Electronics BANANA PLUG STACKING TO MINIGRABBER® CLIP

18AWG cable

Part No.	Description	Price
056249-36-0	Black / 36" Long	$5.25
056249-36-1	Red / 36" Long	5.25

JUMPER CABLES DUPONT STYLE

40 Pin; 9" Long

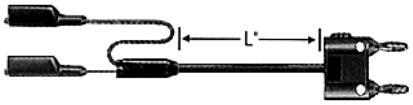
- Compatible with 0.1" Spaced pin headers
- Wt. 0.8 oz
- Product Dimensions: 5.2" x 2.5" x 0.2"

Part No.	Description	Price
27DWCMF	Male to Female (40 Pin)	$8.50
27DWCFF	Female to Female (40 Pin)	$8.50
27DWCMM	Male to Male (40 Pin)	$8.50

RSR

DUAL BANANA TO ALLIGATOR SET

Dual banana to alligator lead set. RG58A/U coax cable. 36" long.



Part No.	1-9	10+
05DBA	$3.25	$3.00

Pomona Electronics

BANANA JACK TO BANANA PLUG

18AWG Wire

Part No.	Description	Price
054702-36-0	Black / 36" Long	$6.90
054702-36-1	Red / 36" Long	6.90

RSR

PORTABLE TEST LEAD HOLDER

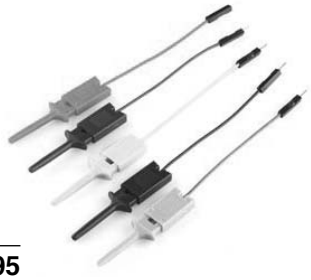
This probe-leads stand can be moved in all directions. 4 rails, 260 mm long.

- Holder-rollers and container
- 5 multidirectional castors
- Storage container
- Holder hook lines
- Suitable for classrooms and laboratories
- Can hold 125+ leads

Part No. 05PTLH • Price: $98.00

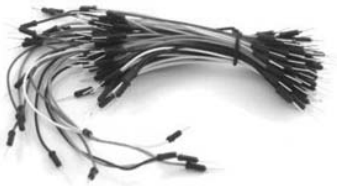
IC HOOK / PIN SET

- IC Hook to male pin. Wire length 2.5"
- Bag of 5 IC Hooks of different colors (red, black, green, white and blue)



Part No. 05ICSET1 • Price $4.95

JUMPER WIRE KIT



- 75 piece
- Solid pin at each end
- 55 short jumpers (3 1/8")
- 10 medium jumpers (4 7/8")
- 5 long jumpers (6 3/8")
- 5 extra long jumpers (8")
- Colors: Yellow, Green, Black, Orange, Blue, White and Red

Part No.	Price
32JWKZN	$5.50

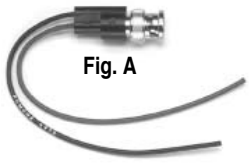
JUMPER WIRE KITS

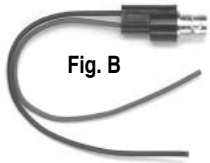
These wires come in five colors and two different lengths. Available in male pin to male pin; male pin to female terminal; female to female terminal

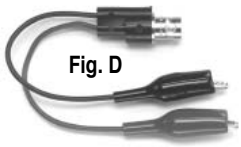
Part No.	Description	Price
2700JWK10	10 pcs, male/male, 5 colors, 6" long	$3.90
2700JWK11	10 pcs, male/male, 5 colors, 12" long	3.90
2700JWK12	10 pcs, male/female, 5 colors, 6" long	3.90
2700JWK13	10 pcs, female/female, 5 colors, 6" long	3.90
2700JWK14	30 pcs, 10 pcs ea, m/m, m/f, f/f, 5 diff colors, 6" long	9.95
2700JWK15	40 pcs, 10 pcs ea m/m, 6" long, 10 pcs m/m 12" long, 10 pcs f/f 6" long, 10 pcs f/f 12" long. All items 5 diff. colors	12.95
2700JWK16	Jumper Wire Kit - F/F, 12", 10 pcs	4.25

Pomona Electronics BNC BREAKOUT CABLES

OVERALL LENGTH 7" ON ALL LEADS







Part No.	Fig.	Description	1-9	10+
05BB4970	A	BNC male to 20 AWG leads	$9.95	$8.95
05BB4969	B	BNC female to 20 AWG leads	6.95	6.75
05BB2886	C	BNC male to mini alligator clips	12.95	12.25
05BB2631	D	BNC female to mini alligator clips	10.95	10.50
05BB2630	D	BNC female to alligator clips	10.95	10.50
05BB3957	E	BNC male to stacking banana plugs	14.50	13.75
05BB3073	F	BNC female to stacking banana plugs	10.90	10.50
05BB3789	G	BNC male to minigrabber test clips	11.95	10.95
05BB3788	H	BNC female to minigrabber test clips	9.50	8.95
05BB5305	I	BNC female to SMD grabber test clips	14.50	13.50

Pomona Electronics BNC CABLES

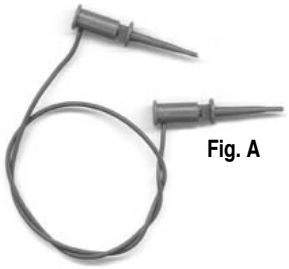
- **Model 2249-C:** 50Ω cable / RG58 C/U OD=.195". Ideal for most test and measurement applications.
- **Model 2249-Y**: 50Ω cable / RG233 OD-.206". With double shield.
- **Model 2249-K**: 50Ω cable / RG174U OD=.10". Superior flexibility.
- **Model 2249-E**: 75Ω cable / RG59 B/U OD-.242". Ideal for TV/Video/LAN applications.

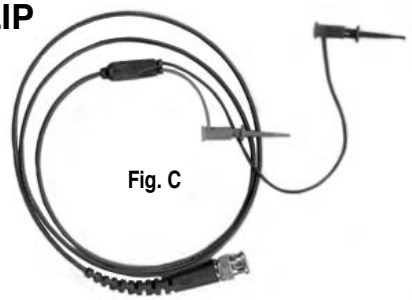
Length	Model 2249-C		Model 2249-Y		Model 2249-K		Model 2249-E	
	Part No.	Price	Part No.	Price	Part No.	Price	Part No.	Price
6"	052249-C-6	$13.50	—	—	052249-K-6	$18.75	052249-E-6	$13.25
12"	052249-C-12	13.50	052249-Y-12	19.95	052249-K-12	18.75	052249-E-12	13.25
36"	052249-C-36	14.75	052249-Y-36	19.95	052249-K-36	21.95	052249-E-36	13.25
60"	052249-C-60	16.95	052249-Y-60	22.95	052249-K-60	19.95	052249-E-60	15.50
144"	052249-C-144	20.95	052249-Y-144	33.65	—	—	052249-E-144	19.95
180"	052249-C-180	23.95	052249-Y-180	37.95	052249-K-180	26.95	052249-E-180	21.95
300"	052249-C-300	31.95	052249-Y-300	54.95	052249-K-300	32.95	052249-E-300	29.95

Pomona Electronics SMD GRABBER® CLIPS

ULTRA THIN MICROGRABBER TEST CLIP

Designed for today's fine pitched SMD's. Contact piniers open to .024" and rotate for further positioning accuracy.





Part No.	Fig.	Description	1-9	10+
05TL5301-12-0	A	Grabber clip on each end of 12" long black wire	7.90	7.25
05TL5301-12-2	A	Grabber clip on each end of 12" long red wire	7.90	7.25
05TL5302-36-0	B	Grabber clip on one end, banana plug on the other, 36" long black wire	8.75	7.75
05TL5302-36-2	B	Grabber clip on one end, banana plug on the other, 36" long red wire	8.75	7.75
05TL5304-36	C	Grabber clips to BNC male, 36" long RG 174/U cable	21.90	21.20

RSR 1000-T
PORTABLE LAB STATION

The RSR 1000-T Lab Station provides the user with a completely self-contained portable lab set-up featuring the most commonly used test equipment and tools.

FULL 2 YEAR WARRANTY
Any tool or component in this kit found to be defective will be replaced up to 2 full years from the date of purchase.
ELECTRONIX EXPRESS

$255.00

PAD-234
ANALOG/DIGITAL TRAINER

Analog/Digital Trainer with onboard power supplies to facilitate the breadboarding of both analog and digital circuits.
Modular design permits ease of assembly and diagnostics. Printed circuit boards are interconnected by compact connector assemblies. Troubleshooting is simplified by conveniently accessible test point jacks.

FTB
FIELD TECHNICIAN'S CASE

- Anodized aluminum texture finish
- Removable tool pallet with 17 pockets
- 18" long x 13" wide x 7" high

DM717
MULTIMETER

- Full featured DMM
- Hfe and capacitance checker
- Audible continuity checker

610-B
LOGIC PROBE

- TTL/CMOS compatible
- 20 - MHz logic tester, Hi/Lo and pulse memory

SCIENTIFIC CALCULATOR

- Standard scientific functions
- Binary, octal, hexadecimal calculations
- Statistical functions

TOOLS AND ACCESSORIES:

- Long Nose Pliers
- Diagonal Cutter
- Wire Stripper
- Soldering Iron
- Heavy Duty Soldering Iron Stand
- Desolder Vacuum Pump
- 3 pc. Screwdriver Set
- 3 pc. Nut Driver Set
- 4 pc. Precision Screwdriver Set
- 4 pc. Solder Aid Set
- IC Extractor
- 10 - gm Solder Pack
- Desolder Wick
- Oscilloscope Probe (IC Clip)
- Oscilloscope Probe (Alligator)
- 10 pc. Alligator-to-Alligator Lead Set
- 2 pc. Banana-to-Alligator Lead Set
- 2 pc. Banana-to-Banana Lead Set

Part No.	Prices
32RSR1000TK (PAD 234Kit)	$255.00
32RSR1000TA (PAD 234 Assembled)	295.00

PAD 234 Kit is Available in 3 Modules

PAD 234 SPECIFICATIONS

± Variable Power supply
1 amp output current, short circuit and thermally protected.
+ 5 Volt Power supply
1 amp output current, short circuit and thermally protected.
12.6 VCT AC
Supply Voltage:
Function Generator:
Sine, square, triangular buffered outputs, amplitude variable (10Vp-p maximum), frequency adjustable in 5 ranges from 1 to 100 Khz.
Clock output:
Rise and fall times exceed 400 nanoseconds.
Breadboards:
2 breadboards, each with 840 plug-in tie points.
Indicators:
8 LED indicators, buffered and TTL compatible.
Logic switches:
8 binary miniature SPDT toggle switches to switch either 0-V or +5V.
Power Consumption:
117 VAC @ 0.5 amp.
Additional Features:
3 wire grounded line cord, fuse protected AC line, modular construction, anodized and screened aluminum top panel with aluminum side support brackets.

COMPUTER TOOL KIT

SUITABLE FOR CISCO™ TRAINING

114 PIECES

- Anti-static wrist strap
- Soldering iron
- 8" crimping tool
- 3 way reversible ratchet handle
- 5" long nose pliers
- 5" wire cutter/stripper
- 4 1/2" side cutter
- Knife
- Mini flashlight
- **8 pcs. star bit:** T10H, T15H, T20H, T25H, T27H, T30H, T35H, T40H
- **5 pcs. torque bits:** T8, T10, T15, T20, T27
- **6 pcs. hex key bits:** 5/64", 3/32", 7/64", 1/8", 9/64", 5/32"
- **4 pcs. square bits:** #0, 1, 2, 3
- **4 pcs. tri-wing bits:** 1, 2, 3, 4
- **6 pcs. hex key bits:** 2, 2.5, 3, 4, 5, 6mm
- **2 pcs. phillips bits:** #0, #2
- **2 pcs. flat bits:** 4, 6mm
- 1 pc. pozidriver bit
- 1 pc. adapter bit
- **6 pcs. precision screwdriver set** Phillips screwdriver: #0, #1 Slotted screwdriver: 1.4, 2.0, 2.4, 3.0
- 4 pcs. electronic combination wrench set
- **7 pcs. socket:** 5, 6, 7, 8, 9, 10, 11mm
- 10 pcs. reusable cable tie
- Brush
- Spare parts container
- 12 pcs. screw (2 types)
- 6 pcs jumpers
- 6 pcs washers
- 9 pcs hex keys
- Electronic tester
- Three prongs holder
- IC insertion-extraction clipper (for 14-58 pin ICs)
- **Weight:** 4 lbs
- Zipper case

Part No.	1-9	10+
3200CTK14	$43.95	$42.50

RSR COMPUTER SERVICE KIT

82 PIECES

- 5" long nose pliers
- IC insertion-extraction clipper (for 14–48 pin ICs)
- 5" wire stripper
- Mini flashlight
- 2 pcs. batteries
- PLCC IC extractor
- 23 in 1 screwdriver
- Part case
- 36 pcs. screws (6 types)
- 6 pcs. jumpers
- 8 pcs washers
- Multi-function case
- Wt. 2.1 lbs.
- Bit group:
  - — 5 pcs. torque screwdriver: T8, T10, T15, T20, T25
  - — 7 pcs hex key: 1.5, 2, 2.5, 3, 4, 5, 6
  - — 3 pcs. Phillips: #0, #1, #2
  - — 3 pcs. flat: 3mm, 5mm, 6mm
  - — 2 pcs. pozidriv: pz1, pz2
  - — 2 pcs. socket: 3/16", 1/4"
  - — Socket adapter

Part No.	1-9	10+
3200CTK7	$21.50	$20.25

RSR COMPUTER SERVICE KIT

63 PIECES

- Ratch handle
- Reversible ⊖1/8" and ⊕#0 mini screwdriver (with pocket chip)
- 1/4" x 3" socket holder
- Bit holder
- 10 pcs. bit group:
  - — 5 pcs. torque: T8, T10, T15, T20, T25
  - — 2 pcs. flat: 5mm, 6mm
  - — 2 pcs. Phillips: #1, #2
  - — 1 pc. adaptor bit
- 10 pcs socket: 3/16", 1/4", 5/16", 11/32", 3/8" 6, 7, 8, 9, 10mm
- Tweezers
- IC insertion-extraction clipper (for 14–48 pin ICs)
- Knife
- 9 pcs. hex keys
- Brush
- Spare parts container
- 12 pcs. screws (2 types)
- 6 pcs. jumpers
- 6 pcs washers
- Dark green zipper case
- Wt. 1.32 lbs.

Part No.	1-9	10+
3200CTK8	$14.90	$13.90

RSR TECH TOOL KIT

ESSENTIAL KIT FOR FIELD TECHNICIANS AND ENGINEERS

TOTAL OF 78 PIECES

- 5" long nose pliers
- 4 1/2" side cutter
- PLCC IC extractor
- 3 pcs. IC inserter (14-16, 24-28, 36-40 pin ICs)
- 6 pcs precision screwdriver set: (⊖ 2.4x75, ⊖ 3x100, ⊖ 3.8x150), (⊕ 2.4x75, ⊕ 3x100, ⊕ 3.8x150)
- Reversible ratch handle
- 7 pcs socket: 5, 6, 7, 8, 9, 10, 11 mm
- 7 pcs socket: 3/16", 1/4", 9/32", 5/16", 11/32", 3/8", 7/16"
- Bit group: 7 pcs hex key: 1.5, 2.0, 2.5, 3.0, 4.0, 5.0, 6.0 mm 8 pcs hex key SAE: 1/16", 5/64", 3/32", 1/8", 5/32", 3/16", 7/32", 1/4" 2 pcs phillips: #1, #2 2 pcs flat: 5mm, 6mm 2 pcs torque: T10, T15 Adaptor bit for screwdriver socket
- IC extractor
- Three prongs holder
- 2 pcs tweezers
- 2 pcs precision aligner tools
- 3 pcs soldering aid tools
- Tweezers-serrated inside point
- Digital multimeter
- Easy wire stripper
- Anti-static solder pump
- Cable stripper
- Brush
- Solder reel
- Anti-static wrist strap
- Soldering iron
- 6" adjustable wrench
- 9 1/2" crimping tool
- Solder stand
- Mini vacuum cleaner kit set
- 6 pcs screwdriver set: ⊖ 1/8", ⊖ 3/16", ⊖ 1/4" ⊕ #0, ⊕ #1, ⊕ #2
- Black suitcase

Part No.	1-9	10+
3200CTK10	$135.00	$130.00

RSR COMPUTER TOOL KIT

MODEL CTK12

All essential tools for computer user in a black vinyl case.

- 2 nut drivers (1/8", 1/4")
- 2 screwdrivers – slotted (1/8", 3/16")
- 2 screwdrivers – phillip (#0, #1)
- Torque screwdriver (T10 and T15)
- 3 claw part holder
- IC Extractor
- Assembly tweezer
- Spare parts tube
- Spare parts box containing jumpers, washers and screws

Part No.	1-9	10+
3200CTK12	$10.95	$9.95

RSR COMPUTER CLEANING /SERVICE KIT

28 PIECES

- CD-ROM laser lens cleaner
- Anti-static cleaning pad
- Anti-static computer cleaning cloth
- Cleaning wand
- Anti-static cleaning brush
- Tweezers
- 3.5" cleaning disk
- 60 CC cleaning solution
- 18 CC head cleaning fluid
- Mini vacuum cleaner
- Micro-thin cloth
- Black zipper case
- Wt. 1.21 lbs.

Part No.	1-9	10+
3200CTK9	$21.90	$20.95

RSR FTK-1 CUSTOM TOOL KIT

23 quality-built technician tools packed in a sturdy tool box. This kit includes a 2-tray tool box (13 3/8" x 7" x 6") and the following tools:

LONG NOSE PLIER
4 1/2" drop forged, with spring return.

DIAGONAL CUTTER
4 1/2" drop forged, with spring return.

WIRE STRIPPER
Adjustable, with cushion grip.

SOLDERING IRON
25W, 3 prong line cord and plug with chisel tip.

SOLDERING IRON STAND
Weighted base, spiral holder & sponge.

3 PIECE SOLDER AID TOOL SET
Brush & Scraper (to clean solder connections and remove excess solder).
Fine point & slotted probe (to clean and ream holes).

DESOLDER VACUUM PUMP
Aluminum housing with replaceable non-stick nylon tip.

DESOLDER WICK
5' Braid in a convenient plastic dispenser.

SOLDER
Rosin core 60/40 0.031 diameter, 10 gm, pencil pack.

HEAT SINK
2 1/2" aluminum clip with spring return.

SCREWDRIVERS
- Slotted head with 3/16" tip
- Phillips head #1
- Slotted head, 1/8" tip with pocket clip.

4 PIECE PRECISION SCREWDRIVER SET
Metal set with swivel tips

3 PC. NUT DRIVER SET
- 1 piece, 3/16" black.
- 1 piece, 1/4" red.
- 1 piece, 5/16" yellow.

TOOL BOX
2 tray box, with lock.

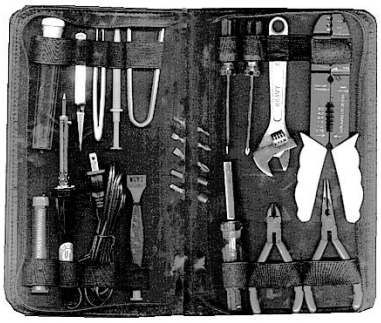
GOGGLES

FULL 2 YEAR WARRANTY
Any tool or component in this kit found to be defective, will be replaced up to 2 full years from the date of purchase.
R.S.R. ELECTRONICS, INC.
ONLY $32.75

Part No.	Description	1-9	10+
3200FTK1	FTK1 Custom Tool Kit	$34.75	$32.75

RSR COMBO TOOL KIT

20 PC. SET



- 1 – Spare parts tube
- 1 – Electronic tweezers w/self-closing tip
- 1 – Assembly tweezer (4 1/2")
- 1 – 3 claw grabber
- 1 – IC Insertion tool
- 1 – IC Extraction tool
- 1– 1/8" Flat screwdriver
- 1 – #0 Phillips screwdriver
- 1 – 6" adjustable wrench
- 1 – Crimping tool, wire stripper/cutter
- 1 – Reversible torx driver bit (T10, T15)
- 2 – Reversible screwdriver bit (#1, #2, 1/4", 3/16")
- 2 – Nut driver bits (1/4, 3/16)
- 1 – 10 gm tube solder
- 1 – 30 Watt Soldering Iron (UL)
- 1 – Handle, fits all bits
- 1 – Diagonal cutting pliers (4 1/2")
- 1 – Long nose side pliers (5") w/cutter
- 1 – Vinyl zipper case (11 3/4" x 6 3/4" x 1 1/4" folded)

Part No.	1-9	10+
3200CTK3	$27.95	$26.95

RSR TOOL KIT

MODEL CTK4

21 PC. SET

- 1/4" Flat Screwdriver
- #2 Phillips Screwdriver
- 3/16" Flat Screwdriver
- #1 Phillips Screwdriver
- 1/8" Flat Screwdriver
- #0 Phillips Screwdriver
- 1/4" Nut Driver
- 3/16" Nut Driver
- Reversible T10 & T15 Torque Screwdriver
- Solder Reel
- Soldering Iron (UL)
- Spare Parts Tube
- Tweezers
- 3 Claw Grabber
- Reverse Action Tweezers
- IC Inserter (14-16 Pin ICs)
- IC Extractor
- 5" Long Nose Pliers
- 5" Diagonal Cutter
- 8" Crimping Tool
- Black Zipper Case

Part No.	1-9	10+
3200CTK4	$27.95	$26.95

Crescent®

70-PC. PROFESSIONAL TOOL SET

With 1/4" and 3/8" quick release ratcheting drives, 32 SAE and metric sizes, 12 SAE and metric combination wrenches plus 24 other tools. All tools are industry quality, meet stringent new ANSI and ASME specifications, and come with a full satisfaction guarantee. See our website *http://www.elexp.com* for complete details.

Part No. 0602CTK70SET • Price: $64.95

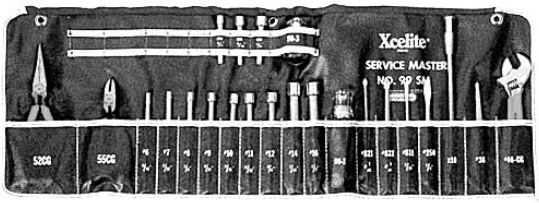
Xcelite® MULTI-PURPOSE KIT

Thirty nine piece kit of top quality screwdrivers and nutdrivers in a protective and convenient fold-up case that can be hung on a wall.

Part No. 060199MP • Price: $207.00

Xcelite®

SERVICE KITS



- 23-piece kit contains handles and interchangeable screwdrivers, nutdrivers and other blades, plus wire stripper with cutter.
- Available in a durable, roll-up plastic coated canvas case for easy selection and storage.

Part No.	Price
060399SM	$186.00

Crescent®

LOCKING PLIER SETS

Part No.	Description	Price
0602CLP5SET	5 pc. set: 5", 7" & 10" curved; 6" and 9" long nose	$39.95
0602CLP3SET	3 pc. set. 5", 7" & 10" curved	21.95
0602CLP2SET	2 pc. set. 7" & 10" curved	16.95

Crescent®

148-PC. PROFESSIONAL TOOL SET

Contains all tools needed for most industrial applications, including 1/4", 3/8" and 1/2" quick release ratcheting drives with a wide selection of standard and deep sockets in common SAE and metric sizes. Meets new ANSI and ASME specifications. Visit our website at *http://www.elexp.com/* for complete details.

Part No. 0602CTK148MP • Price: $93.95

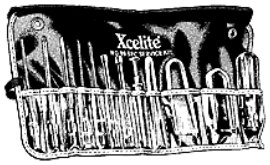
Crescent®

170 PIECE MECHANIC'S TOOL SET

- Carefully selected assortment of Crescent® brand hand tools
- Set contains all the tools needed for most industrial applications, including 1/4", 3/8" and 1/2" quick-release ratcheting drives, with a wide selection of standard and deep sockets in the most common SAE and metric sizes
- All tools in this industrial-quality tool set meet stringent new ANSI and ASME specifications and come with a full satisfaction guarantee.

Part No 0602CTK170CMP • Price: $169.00

Xcelite® PERSONAL COMPUTER REPAIR KIT



- Ideal for repairs on all PC's
- Anti static chip tools protect from ESD damage
- Convenient roll-up pouch

Part No. 060199SPC • Price: $51.00

Xcelite®

PROFESSIONAL TOOL KITS

200 SERIES

- Quality made-in-USA Xcelite products
- 10 individual hand tools and (27) Series 99 interchangeable screwdriver/nut driver blades and handles
- In addition to (27) assorted blades and handles, contains 6" curved nose seizer, 6" adjustable wrench, 6 1/2" long nose pliers, 7" utility pliers, 4" and 5" diagonal pliers, 5 1/2" needle nose pliers, electronic snips, wire stripper/cutter, electrician's knife.

Part No.	Description	Price
0601TCS200ST	Tools with Cordura® Case with Heavy-duty Zipper	$430.00

RSR TOOL KIT
IN ZIPPERED CASE

INCLUDES:

- Long Nose Plier
- Wire Stripper
- Solder Stand with Tray
- Desolder Vacuum Pump
- 4 Pc. Solder Aid Set
- 3 Pc. Nut Driver Set
- Parts Container
- IC Extractor
- 4 Pc. Precision Screwdriver Set
- Diagonal Cutter
- Soldering Iron
- 10gm Tube Solder
- Desolder Wick
- #1 Phillip Screwdriver
- 1/8" Pocket Screwdriver
- 3/16" Slotted Screwdriver
- Zipper Tool Case

Part No.	1-9	10+
3200ZTL	$35.95	$34.95

RSR COMPUTER TOOL KIT
ECONOMY MODEL - 12 PC.

MODEL CTK1

- 2-Slotted, 2 Phillips Screwdrivers
- Torque Screwdriver
- Three-Claw Part Holder
- Assembly Tweezers
- IC Extractor
- 2- Nut Drivers
- Spare Parts Tube
- Carrying Case

MODEL CTK2

Same as CTK1 with IC inserter and w/o spare parts tube.

Part No.	1-9	10+
3200CTK1	$8.95	8.25
3200CTK2	9.95	8.25

RSR TOOL KIT IN A POUCH

A basic tool kit containing the following:

- Soldering Iron
- Diagonal Cutter
- Needle Nose Plier
- Wire Stripper
- Solder Tube
- Desolder Wick
- #1 Phillip Screwdriver
- 4" x 3/16" Slotted Screwdriver

Part No.	Description	1-9	10+
3200BTK1	Basic Tool Kit	$17.95	$16.95

RSR BARE BONES TOOL KIT

SAVINGS OF OVER *30%* From Regular Pricing

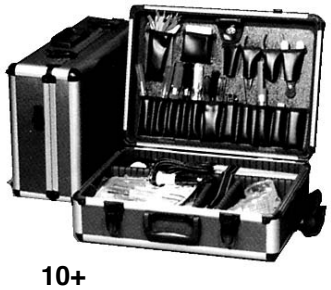
Contains following essential start-up tools:

- **25W Pencil-type Soldering Iron**
- **Needle Nose Pliers** – 4 1/2" long, return spring
- **Wire Strippers** – Adjustable, with return spring
- **1/8" Slotted Screwdriver** – With pocket clip. 2" shaft
- **De-solder Wick** – 5' roll
- **10G Solder Tube**
- **Soldering Heat Sink**

Part No.	1-9	10+
3200BBTK	$12.50	$11.90

FTB-1 CUSTOM TOOL KIT

Same 23 quality tools as in the FTK-1 Tool Kit, except the case is as large as a Field Tech Box (18" x 13 1/2" x 7").



Part No.	1-9	10+
3200FTB1	$75.95	$69.95

RSR COMPUTER TOOL KIT
19 PIECES

Premium tool kit featuring most popular tools for repairs and upgrades.

- 5 pieces torque screwdriver bits – T8, T10, T15, T20, T25
- 2 pieces slotted screwdriver bits
- 2 pieces Phillips.
- 2 pieces nut driver bits – 3/16", 1/4"
- 3-way ratchet driver handle – forward, lock and reverse. Bits can be stored inside rubber grip handle
- IC extractor
- Tweezers
- IC inserter
- Combination Phillips/slotted mini screwdriver with pocket clip
- 3 prong parts claw/retriever
- Black zipper case

Part No.	1-9	10+
3200CTK5	$10.95	$9.95

STORAGE CABINETS

24 Drawer
10124

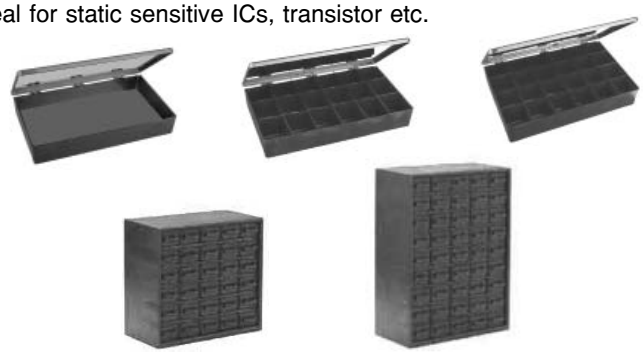
64 Drawer
10164

Strong plastic cabinets organize and protect components. Drawers are polypropylene. Cabinets 20"L x 15-13/16"W x 6-3/8"H

Part No.	Description	1-9	10 +
061710124	24 Drawers	$42.95	$41.50
061710164	64 Drawers	38.95	36.95

CONDUCTIVE / ANTISTATIC BOXES AND STORAGE CABINETS

Ideal for static sensitive ICs, transistor etc.



Part No.	Description	Price
03CB1	Box-11"x6 3/4 x1 3/4" – 1 compartment	$24.95
03CB2	Box-11"x6 3/4 x1 3/4" – 18 compartments	29.50
03CB3	Box-13 1/8"x 9"x2 5/16" – 24 compartments	49.95
03CB4	Cabinet -11"x12"x6" – 30 drawers	92.50
03CB5	Cabinet -17"x12"x6" – 45 drawers	136.00

- 3" heavy-duty easy rolling, rubber wheels.
- Top and shelves made of wood core, faced with rigid, mar-resistant, heat resistant, non-conductive tempered hardboard; or plastic laminate.
- Edges protected by resilient plastic T-molding. Radiused corners.
- Legs and braces made of 1" heavy gauge, steel tubing – no chipping or rusting. Stays attractive under hard use.
- Optional 4" heavy duty rubber wheels as well as ball bearing and locking wheels.

ALL CARTS ARE SHIPPED BOXED AND READY-TO-ASSEMBLE

PORTABLE SERVICE CART

MODEL EZ45
Hardboard top w/silver finish tubing

MODEL EZ45G
Grey plastic laminate top w/silver finish tubing

TOP 24" X 24"
HEIGHT 30"

Part No.	Price
98EZ45	$92.00
98EZ45G	89.00

MOBILE STOCK CART

MODEL EZ45-7
Hardboard top w/silver finish tubing

MODEL EZ45-7G
Grey plastic laminate top w/silver finish tubing

TOP 22" X 32"
HEIGHT 30"

Part No.	Price
98EZ45-7	$105.00
98EZ45-7G	105.00

LO-BOY UTILITY CART

MODEL EZ45-9
Hardboard top w/silver finish tubing

MODEL EZ45-9G
Grey plastic laminate top w/ silver finish tubing

TOP 22" X 32"
HEIGHT 19"

Part No.	Price
98EZ45-9	$92.00
98EZ45-9G	92.00

MOBILE STOCK CART

MODEL EZ45-7T
Hardboard top w/silver finish tubing

MODEL EZ45-7TG
Grey plastic laminate top w/silver finish tubing

TOP 22" X 32"
HEIGHT 30"

Part No.	Price
98EZ45-7T	$140.00
98EZ45-7TG	139.00

MOBILE INSTRUMENT CART

MODEL EZ45-6
Hardboard top w/silver finish tubing

MODEL EZ45-6G
Grey plastic laminate top w/silver finish tubing

TOP 17" X 19"
HEIGHT 34"

Slanted top ideal for oscilloscopes, digital voltmeters, digital multimeters, and other similar equipment.

Part No.	Price
98EZ45-6	$94.00
98EZ45-6G	92.00

MOBILE INSTRUMENT CART

MODEL EZ45-8
Hardboard top w/silver finish tubing

MODEL EZ45-8G
Grey plastic laminate top w/silver finish tubing

Slanted top ideal for oscilloscopes, digital voltmeters, digital multimeters and other similar equipment.

TOP 23" X 19"
HEIGHT 34"

Part No.	Price
98EZ45-8	$105.00
98EZ45-8G	105.00

MOBILE CLASSROOM CART

MODEL EZ45-5
Hardboard top w/silver finish tubing

MODEL EZ45-5G
Grey plastic laminate top w/silver finish tubing

44" height permits unobstructed viewing from anywhere in the meeting or classroom.

TOP 24" X 24"
HEIGHT 44"

Part No.	Price
98EZ45-5	$115.00
98EZ45-5G	115.00

ADD A DRAWER TO ANY CART – Except Instrument Carts

TOP 12" x 15 1/2" – HEIGHT 4"

Plastic drawer comes complete with hardware. Drawer fronts made of same material as tops and shelves. Optional lock available. Grey plastic laminate finish

Part No. 98EZ44G • Price: $35.00

Xcelite® TOOL KITS *100 SERIES*

Attractive tools cases, contains 53 individual tools, plus 31 series 99 interchangeable screwdriver/nut driver blades and handles and two specialized screwdriver/nut driver kits as listed.

INTERCHANGEABLE SCREWDRIVERS, NUT DRIVERS, OTHER TOOLS AND HANDLES:

Handles: 99-1, 99-1-R, 99-4-R (3 total)
Extensions: 99-X5. 99-X10 (2 total)
Reamer: 99-38
Slotted Screwdriver: 99-125, 99-250, 99-312, 99-811 (4 total)
Phillip Screwdriver: 99-820, 99-821, 99-822 (3 total)
Multiple Spine Blades: Bristol 6 flute 99-61 to 99-69 (9 total) Alien hex
Blades: 99-20 to 99-26, 99-764, 99-964 (9 total)

PLIERS, WRENCHES, CUTTERS:
Straight nose seizer (424), Adjustable wrench 6" (46CG). Slip joint plier 5" (50CG), Long nose plier 6" (51CG), Plier 7" (53CG), Diagonal pliers 4" (54CG), Diagonal plier 6" (66CG), Needle nose plier 5 1/2" (57CG), Chain nose plier 8" (59CG), Electronics snips (86CG), Wire stripper/cutter (103-S), Electronics knife (K22).

SET AND KITS:
Mini drivers (M-60), Offset ratchet screwdrivers (XL-75), Combination screwdriver-nut driver tool (#600), Dual reversible screwdriver blade (SB1).

SCREWDRIVERS:
12 Slotted Screwdrivers:
R144, R146, R181, R3164, R3166, R3323, R5325, S388, S3161, S5161, S5166.

4 Phillip Screwdrivers: SX-101, XST-100, XST-101, XST-102.
2 Hex Socket Screwdrivers: P18, P19
8 Hollow Shafts: HS6, HS8. HS10, HS11, HS12, HS14, HS16, HS18.
2 Magnetic: 8M, 10M
10 Midgets: P3 to P12, with torque amplifier handle.

Part No.	Description	Price
3200TCS100ST	Above tools with case made of rugged Cordura® with dual heavy duty zippers and soft, leather wrapped handles	$820.00
3200TCMB100ST	Above tools with tough black polyethylene case	895.00
3200TCA100ST	Above tools with Hi tech smooth finish aluminum tool case	1,040.00
3200TCMB100STW	Above tools with black attache tool case with wheels	1,040.00

TOOL BOXES

ASSORTED SIZES AND SHAPES

Fig. A

Fig. B

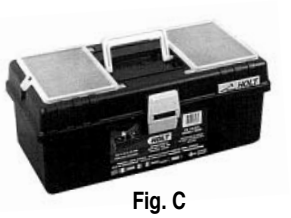


Fig. C

Fig. D

Fig. E

Fig. F

Part No.	Description	Size	Fig.	1-9	10+
061100	2 tray with lockable latch	13 3/8" x 7" x 6"	A	$15.90	$14.80
06116133	Jumbo 3 tray	19" x 10" x 9 3/4"	B	27.75	26.25
061116003	1 tray removable	15.5" x 6" x 8"	C	12.95	11.95
0611FTB	Field Tech Case with tool pallet	18" x 13" x 7 1/2"	D	55.00	49.00
061107	Blow Molded Box	13" x 9.5: x 5.25"	E	15.95	14.95
061127	Zippered Tool Case	22" x 13" (open) 15" x 11" (closed/zippered)	F	13.75	13.50

ZIPPERED TOOL CASE

- Vinyl technician's zippered tool case with 27 elastic holders of varying sizes.
- Holds screwdrivers, soldering iron, meter, parts box, hand tools and more.
- Rugged handles with velcro clasp.
- Dimensions: 22" x 13" (open). 15" x 11" (closed/zippered).

Shown Here With Tools ***(Tools Not Included)***

Part No.	1-9	10+
061127	$13.95	$13.75

TECHNICIAN CASE

- Made of durable, black Cordura® type nylon. Tool pockets and holders are riveted for maximum durability.
- Lightweight, high-quality carrying and tool case with pockets for 30 tools, a multimeter and test leads.
- Easy to carry with padded handles and three outside pockets for books, manuals, calculators or spare parts.
- **Size:** 14"(W) x 11"(H) x 3"(D)
- **Weight:** 2.8 lbs

Part No.	1-9	10+
0611BCB	$26.95	$24.95

POWER SUPPLY/ PROJECT CASE

Ventilated project box. Ideal for a power supply or other heat producing circuit Size: 3.3" x 4.8" x 2.6"

Part No.	1-9	10+
061136	$4.95	$4.50

DOUBLE COVER LOCKJAW ORGANIZER

Bulk storage

Product Features:
Increased small parts storage makes the 5231 a must have for the home or garage. All the features of our other Stow N` Go products with the addition of extra storage under a secondary lid.

Part No.	Description	Size	Price
0611PL5231-01	2 tray with lockable latch	14 1/2" x 3 3/8" x 11 3/4"	$15.20

PLASTIC ENCLOSURES COMPLETE WITH 4 SCREWS AND LID

THICKNESS: 2MM; COLOR: BLACK

Part No.	Size	1-9	10+
061160	2.9" x 1.9" x 1.1"	$1.50	$1.35
061161	4.0" x 3" x 1.6"	1.95	1.75
061162	5.9" x 3.9" x 2.3"	2.95	2.75
061163	8.7" x 5.4" x 3.6"	6.50	6.25

PLASTIC INSTRUMENT CASES

Part No.	Size	1-9	10+
061133	7.7" x 4.3" x 3"	$8.50	$7.95
061134	7.9" x 6.3" x 2.5"	8.50	7.95
061135	10" x 7.5" x 3.1"	10.50	9.95

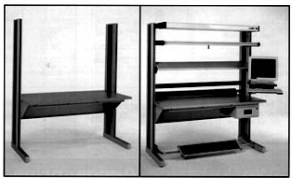
FLAMBEAU SATCHEL CABINET

- Ideal for small parts
- Interlocking cabinets
- Dent-proof, scratch-resistant textured finish
- Rust-proof polypropylene
- Custom colors and hot-stamping
- Lightweight drawers for easy removal
- IDS satchels can be divided for optimum organization
- Cabinets can be stacked or mounted
- Cabinets can accommodate multiple series boxes
- 14.5" x 15.5" x 15.75"; 5 drawers

Part No. 06118500ST • Price: $104.00

DIMENSION 4 MODULAR WORKSTATIONS

- Expandable, single sided
- Fully adjustable – work surface, shelfing, footrests and other components may be set for each worker's comfort
- Rolled front edge
- ESD work surface version available



D4 SINGLE SIDED STARTER – First building block for single sided system. Two uprights and a work surface. 30"D x 60"L x 72"H. ESD work surface version available.

ACCESSORIES

DRAWERS – Heavy gauge steel. Left or right mountable, stackable. Includes lock. 100 lb. capacity ball bearing drawer slides. 6" and 12" models available.

SHELVES – 12" x 60" adjustable steel shelves. ESD version available.

LIGHT FIXTURE – 60", mounts to uprights. Angle adjustable in addition to up/down and in/out. Uses two T8 tubes (*not included*).

ELECTRICAL ASSEMBLY – 60" channel with three duplex outlets, on/off switch, pilot lamp and 15 Amp breaker.

PARTS BIN STRINGER – Adjusts up/down, in/out. Accepts standard parts bins and other accessories. ESD version option comes with ground cord.

FOOTREST TUBE – 60", tube only

FOOTREST PAN – 36" wide ergo foot support w/non-skid surface. Requires tube.

CRT PLATFORM – 15" x 15" x .75". Rotates 360 on swivel arm. Mountable inside or outside of uprights. 25 lb. capacity.

TOOL TROLLEY – 60" tool trolley with one slide tool hanger included.

TOOL TROLLEY HANGER – Additional hanger.

PARTS BIN RACK – 12 bin capacity. Mountable inside or outside of uprights. Shelves on swing arm.

AIR SYSTEMS – Single version provides 1/4" air quick disconnect, bracket, tubing and fittings. Double version provides two disconnects and hardware.

Part No.	Description	Price
98QS610014	Starter, Single Sided Workstation	$999.00
98QS610044	Adder, Single Sided	668.00
98QSE610014	ESD Starter, Single Sided Workstation	1,187.00
98QSE610044	ESD Adder, Single Sided Workstation	857.00
98QS110522	6" Drawer	180.00
98QS2050004	12" Drawer	239.00
98QS110450	Shelving	120.00
98QSE110450	ESD Shelving	193.00
98QS110475-8	Light Fixture	298.00
98QS110483	Electrical Assembly	184.00
98QS110492	Parts Bin Stringer	66.00
98QSE110492	ESD Parts Bin Stringer	85.00
98QS110462	Footrest Tube Only	81.00
98QS110465	Ergo Foot Pan	76.00
98QS2012621	CRT Platform	188.00
98QS2012633	Keyboard Holder	45.00
98QS2012452	Tool Trolley	93.00
98QS2012459	Additional Tool Trolley Hanger	28.00
98QS2012626	Parts Bin Rack w/Swing Arm	199.00

PLASTIC BOXES

Fig. A

Fig. B

Fig. C

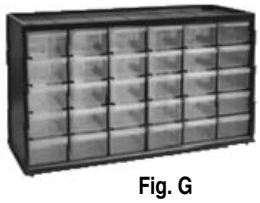


Fig. G

Fig. D

Fig. E

Fig. F

Part No.	Size	Description	Fig.	1-9	10+
061122	2 7/8" x 2" x 1"	Rigid hinged; polystyrene	A	$0.60	$0.50
061121	4 3/4" x 2 1/16" x 1 1/8"	Rigid hinged; polystyrene	A	0.95	0.85
061125	4 5/8" x 3 1/2" x 1 1/4"	Rigid hinged; polystyrene	A	1.50	1.40
0611K601	10 3/4" x 6 1/2" x 1 3/4"	Rigid hinged, polystyrene	A	7.95	7.50
0611E108	4 3/4" x 3 3/8" x 3/4"	6-fixed divisions; polypropylene	B	1.50	1.20
0611T155	5 1/2" x 3" x 1"	5-fixed division polystyrene	C	2.85	2.70
0611K208	7 1/2" x 4" x 1 1/4"	12-fixed division polypropylene	C	4.65	4.30
0611M201	8 1/4" x 4 1/2" x 1 3/8"	12-fixed division polypropylene	C	4.45	4.25
0611M612	11" x 6 3/4" x 1 3/4"	12-fixed division polypropylene	C	6.25	5.95
0611T600	10 1/2" x 6 1/2" x 1 1/2"	Flexible division polypropylene	D	7.95	7.55
0611PL5231-01	14 1/2" x 11 3/4" x 3 3/8"	2 Tray w/ 12 to 48 Divisions (Flexible)	E	15.20	14.75
0611F1032-2	13" x 18" x 3 1/4"	12 to 62 Compartments (Flexible) with Lid Storage	E	36.95	34.95
061130	11 1/4" x 12" x 6"	Storage cabinet; 30 drawers	G	38.98	37.95
061145	16 1/2" x 12" x 6"	Storage cabinet; 45 drawers	G	42.95	41.95

UTILITY COMPONENT STORAGE BOXES

Fig. A

Fig. B

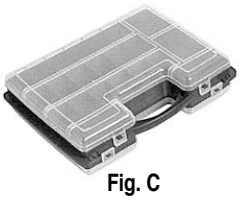


Fig. C

Fig. D

Part No	Fig.	Size	Description	1-9	10+
0611ECCH	A	8" x 5.3" x 1.5"	3 to 9 Divisions (Flexible), Polypropylene	3.75	3.50
0611203132F	A	10" x 4.7" x 1.5"	2 to 12 Divisions (Flexible), Polypropylene	3.50	3.20
0611903132D	B	10.7" x 7.2" x 1.7"	6 to 36 Divisions (Flexible), Polypropylene	5.20	4.95
0611ZD925H	C	11.6" x 8.7" x 2.8"	Flexible, 14 Fixed Div., Polypropylene	4.75	4.50
061107	D	13" x 9.5" x 5.25"	Black Plastic Blow Molded	15.95	14.95

ABS SPEEDY BOXES

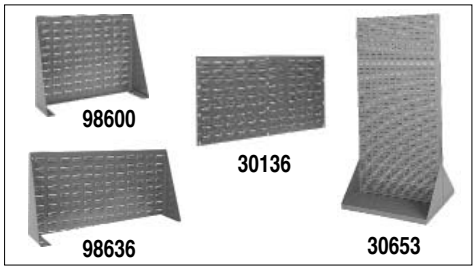
These boxes come with PCB mounting slots on all four sides. Will not crack or split when drilled or punched. Comes complete with four screws and lid. Color: Black

Part No.	Size	1-9	10+
061137	4.9" x 2.5" x 1.5"	$3.95	$3.50
061138	6.0" x 3.5" x 1.9"	4.95	4.50
061139	7.5" x 4.3" x 2.2"	7.75	7.25

PLASTIC INSTRUMENT CASES

Part No.	Size	1-9	10+
061133	7.7" x 4.3" x 3"	$8.50	$7.95
061134	7.9" x 6.3" x 2.5"	8.50	7.95
061135	10" x 7.5" x 3.1"	10.50	9.95

AKRO-MILS LOUVERED HANGING SYSTEMS



30653 Double-Sided Rack With Bins *(Bins Sold Separately)*

Louvered panels and racks used with *AkroBins® (sold separately)* offer secure methods of utilizing workspace and maximizing parts storage and handling efficiency.

- Formed from 16 gauge cold-rolled steel for strength and durability
- Securely support *AkroBins® (sold separately)*
- Bench racks, louvered panels and floor rack models to choose from

Model 98600 – Bench Rack
27 3/4"L x 8"D x 21"H; accepts 6 sizes of *AkroBins®*

Model 98636 – Bench Rack
36"L x 8"D x 21"H; accepts 6 sizes of *AkroBins®*

Model 30136 – Louvered Panel *(Wall Mount)*
35 3/4"L x 19"H; accepts10 sizes of *AkroBins®*

Model 30653 – Louvered Floor Rack *(Double-Sided)*
35 3/4"L x 32"D x 75 1/8"H; accepts10 sizes of *AkroBins®*. Maximum 288 bins

Part No.	Description	Price
9898600	Model 98600 Bench Rack	$86.00
9898636	Model 98636 Bench Rack	99.95
9830653	Model 30653 Double-Sided Floor Rack	735.00

AKRO-MILS AKROBINS®

Can be used alone or stacked together for high density storage. *AkroBins®* work with existing shelving, or may be used with *Akro-Mils®* racks, panels, rails or carts.

30210

30230

- Control inventories and organize parts
- Extra wide stacking ledge for secure stacking
- Large front label slot for bar code scanning or content identification
- Front curved bottom design
- Anti-slide feature for stacked bins
- Full width hanger lip supports heavy loads when suspended from optional hanging rails or louvered panels

PLEASE SPECIFY COLOR AS BELOW*
Red **(RD)** Blue **(BL)** Yellow **(YL)** Gray **(GR)**
* **Example:** 9830210**BL** or 9830210**BL**-CTN

Part No.	L	W	H	Price Ea.	Carton Part No.	Price Ea. When Buying By The Carton	Ctn Qty
9830210	5 3/8	4 1/8	3	$1.95	9830210-CTN	$1.40	24
9830220	7 3/8	4 1/8	3	3.25	9830220-CTN	2.60	24
9830230	10 7/8	5 1/2	5	7.50	9830230-CTN	6.75	12
9830240	14 3/4	8 1/4	7	13.95	9830240-CTN	11.75	12

AKRO-MILS PROCART CONVERTIBLE UTILITY CART

USE AS PORTABLE WORK-STATION OR FOR TRANSPORT

Hinged sides located on top shelf. Drop the sides for "flat top" jobs like sliding big, heavy cartons on the cart and moving them around. Quickly raise the sides and re-configure the cart to "box-top" style to create a portable work station. No tools needed for conversion. Full width handle. Supply compartments molded-in within easy reach of handle. Good for carrying packing tape, markers, keys, paper clips, etc. Large size cart offers cup holder.

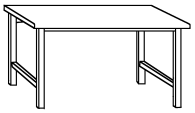
- Optional nine-rail hanging system and interchangeable bins sold separately
- 400 lb. weight load capability. 200 lb. per shelf
- Durable, 5" ball bearing wheels
- Toe-touch locking rear wheels stabilize cart for loading or for use as portable work station
- Easy assembly. Requires Phillips screwdriver and rubber mallet

Part No.	Description	Price
9830936	Large (45" x 24" x 32") ProCart	$329.00
9830930	Small (40" x 19.5" x 32") ProCart	249.00
9830906	Optional Nine-Rail Hanging System For Large ProCart. Necessary to Support Optional Bins.	79.00
9830900	Optional Nine-Rail Hanging System For Small ProCart. Necessary to Support Optional Bins.	75.00
9830220	Optional Bin, Size 7 3/8" x 4 1/8" x 3". Large Cart Accepts 80 Bins, Small Cart Accepts 70 Bins.	2.95
9830230	Optional Bin, Size 10 7/8" x 5 1/2" x 5". Large Cart Accepts 36 Bins, Small Cart Accepts 30 Bins.	7.50

Please specify color for 9830220 and 9830230:
Red **(RD)** Blue **(BL)** Yellow **(YL)** Gray **(GR)**
* **(Example:** 9830220**BL)**

MODULAR WORK BENCHES

Includes Adjustable Leg Extenders



Basic Bench

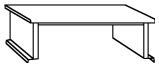
Rolled Front Edges Now Standard

BASIC BENCH

- Bolt-on heavy duty leg extensions accept floor glides. Adjustable leg extender kit included.
- Worksurface height 30". Adjust to 32", 34", 36" high
- Front and rear heavy gauge top support beams, allows 1000 lbs. distributed weight on worksurface.
- Baked on powder epoxy paint finishes. Sky Blue (cleanroom approved).
- Worksurface is laminated with industrial grade low glare white laminate to a full 1 1/4 thickness. Steel threaded inserts are installed in sealed underside for easy installation and strength
- Assembly Hardware: All attachment points are inserted with EZLocks inserts for easy assembly and high strength connections.

ACCESSORIES

INSTRUMENT SHELF



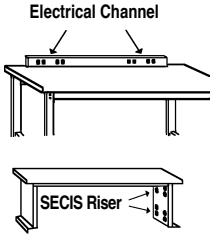
Instrument Shelf

- Heavy gauge formed steel risers clamp onto work surface and attach to underside.
- Access covers detach for installation of SECIS (opt.)
- Full length under shelf channel beam support allows up to 500 pounds of distributed weight on shelf
- Shelf is constructed in same manner as worksurface with matching low glare white laminate and is inserted for all options
- Baked-on powder epoxy paint finish, Sky Blue

INSTRUMENT SHELF LIGHT FIXTURE

Single 48" tube fluorescent fixture with on/off switch mounted under the shelf. Includes wrap around diffuser, single outlet and cord ***(tube not included)***. Use with QS-SSL60 or QS-SSL72.

ELECTRICAL CHANNELS



- The electrical channels and kits are engineered and manufactured by IAC to meet rigid U.L. requirements and are E.T.L. listed. All electrical terminates with an 8' molded power cord.
- Electrical channels may be mounted (1) top/rear of worksurface (2) under shelf front or rear, (3) top rear of shelf.
- SECIS electrical riser replaces riser covers.

FOOTREST

Heavy duty tubular design; adjusts front to rear; bright plated finish.

DRAWERS & CABINETS

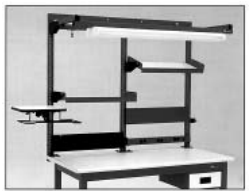
Drawers are constructed of heavy gauge steel and are equipped with ball bearing drawer slides. An attractive recessed drawer body (gloss white) drawer case (sky blue) are standard. May be mounted left or right and stacked for multiple drawer units. Locks are keyed different. Full Extension 100# slides.

Part No.	Description	Price
BENCHES		
98QS-SB3060	Basic: 30D x 60L – Adj. Height	$435.00
98QS-SB3072	Basic: 30D x 72L – Adj. Height	480.00
98QS-SB3672	Basic: 36D x 72L – Adj. Height	530.00
98QS-ESD3060*	ESD: 30D x 60L – Adj. Height	625.00
98QS-ESD3072*	ESD: 30D x 72L – Adj. Height	710.00
98QS-ESD3672*	ESD: 36D x 72L – Adj. Height	790.00
** Add ESD worksurface, dual ground studs and 10' ground cord*		
ACCESSORIES		
98QS-SSL60	Instrument Shelf – 15"D x 60"L x 18"H	240.00
98QS-SSL72	Instrument Shelf – 15"D x 72"L x 18"H	250.00
98QS-ESDL60**	Instrument Shelf – 15"D x 60"L x 18"H	343.00
98QS-ESDL72**	Instrument Shelf – 15"D x 72"L x 18"H	385.00
*** Add ESD worksurface, dual ground studs and 5' coiled ground cord*		
98QS-SIL48	Instrument Shelf Light Fixture	150.00
98QS-SEC60	Electrical – 52"L, fits 60" bench	154.00
98QS-SEC72	Electrical – 64"L, fits 72" bench	170.00
98QS-SECIS	Electrical – SECIS Riser	120.00
98QS-D6	Single Drawer – 6"H x 15"W x 18"D	180.00
98QS-D12	Single Drawer – 12"H x 15"W x 18"D	250.00
98QS-C12	Cabinet W/Door – 12"H x 15"W x 18"D	210.00
98QS-SFR72	Footrest Assembly – 72"	85.00

MULTI-TASK SYSTEM – MTS 50" HIGH FRAME, MOUNTS TO BENCH

Uses heavy gauge, C-clamp type base brackets. 60" and 72" length options. **DRILLING AND INSERTING REQUIRED** *(template supplied).*

MTS UPRIGHT STRUCTURE – BASIC FRAME



Supports accessories. Consists of three 48" double slotted uprights, C-clamps, hardware and 16 gauge top frame tie beam. 60" and 72" lengths available to match bench length.

UTILITY SHELF

12" width. Provides off-the-work-surface storage. ESD laminate shelves include snap and coiled ground cord.

ELECTRICAL CHANNEL – 6 Outlet, 15 Amp Breaker

ECONO LIGHT – Two tube (*tubes not included),* 48" light fixture

TOOL TROLLEY

"W/light" models must be used with Econo-Light. "W/out" light models for use when no light fixture is present. One car included.

MULTI BIN PANEL

Ideal for stacking large number of parts bins. 6" x 28" fits 60" bench; 6" x 34" for 72" bench.

CRT PLATFORM

15" x 15". 360 swival. Swing arm allows wide range of monitor locations.

KEYBOARD HOLDER

Adjustable front to rear. Attaches to CRT platform.

Part No.	Description	Price
98QS1022532	60" MTS Upright	$171.00
98QS1022533	72" MTS Upright	182.00
98QS1022602	60" MTS Shelf	80.00
98QS1022603	72" MTS Shelf	87.00
98QS1022622	60" MTS ESD Shelf	132.00
98QS1022623	72" MTS ESD Shelf	149.00
98QS1022742	60" MTS Electrical Channel	87.00
98QS1022743	72" MTS Electrical Channel	95.00
98QS1022982	60" MTS Light	223.00
98QS1022983	72" MTS Light	232.00
98QS1022722	60" MTS Bin Panel	71.00
98QS1022723	72" MTS Bin Panel	75.00
98QS1022732	60" MTS ESD Bin Panel	81.00
98QS1022733	72" MTS ESD Bin Panel	85.00
98QS1022911	MTS CRT Platform	185.00
98QS2012633	MTS Keyboard Holder	45.00

XYTRONIC® TEMPERATURE CONTROLLED SOLDER STATION

ANALOG DISPLAY

MODEL 169A

- Temperature Range: 300–850 F
- ESD safe, 6 F accuracy

Part No.	Description	Price
0603XY169A	Analog Display Station	$89.00
0606415404	Replacement 1/16" Tip	4.80
0606415403	Conical 1/64" Tip	4.80
0606415410	3/16" Screwdriver Tip	4.80

XYTRONIC® *LEAD FREE* SOLDER STATION

HIGH WATTAGE – ESD SAFE

MODEL LF-2000

- Specifically designed to meet the ever-growing need for lead free soldering
- High power 100 watt unit
- Electronically temperature controlled. 392 – 842 F, 200 – 400 C. Switch selectable C or F readings on digital display
- Auto shut down after 40 minutes
- Sensor fail notification
- Password lock – convenient for control

Part No.	Description	Price
0603XYLF2000	Model LF-2000 Solder Station	$135.00
0603TWZ90	Opt. SMD Rework Tweezers	76.00

XYTRONIC® SOLDER STATION LEAD FREE

80 WATT

- Minitype compact station
- Hi-power heater
- Password lock
- Sensor and heater fail indication
- C / F select mode

Part No.	Description	Price
0603XYLF1600	Complete Station w/Tip	$85.00
060644510601	Conical Tip Spare	3.50

XYTRONIC® SOLDER REWORK STATION MICRODIGITAL

MODEL LF1680D

- Includes soldering iron (80W), SMD tweezer iron (80W) and two stands
- High quality soldering iron with ceramic tips
- Mini station with small foot print
- Hi power heater allows rapid heat up and recovery for lead free soldering
- Password lock
- Temperature range: 392 F (200 C) to 896 F (480 C) for soldering iron and 392 F (200 C) to 842 F (450 C) for tweezer
- Heater and sensor fail notification

Part No.	Description	Price
0603XYLF1680	Complete Station	$139.00
060644510601	Conical Tip Spare	3.50
060846060102	Tweezer Tip Spare	9.80

XYTRONIC® LEAD-FREE SOLDER AND DE-SOLDER STATION

MODEL LF-8800

Includes DLX420 Fume Extractor

TWZ90 *(Opt.)*

- Dual Digital Temperature Displays
- Temp range 150-480 C (302-896 F). Tip temp accurate to within 3 C (6 F)
- Spike free circuitry – zero voltage switching and fully grounded design makes this unit safe for electro-sensitive devices
- Electronic temp control – adjustable temp without having to change tips
- Sensor fail notification
- Includes both soldering iron and desoldering iron
- Self-contained vacuum pump, no shop air needed
- Optional accessories include surface mount tweezer iron and hot-air pencil for small SMD, SOT rework
- Heater power 100 Watt (soldering) and 100 Watt (desoldering)

Part No.	Description	Price
0603XYLF8800	Solder and De-Solder Station	$395.00
0603TWZ90	Opt. SMD Rework Tweezers	76.00
0606710661	Replacement 1/16" Tip	4.80
0606710654	Conical 1/64" Tip	4.80
0606710663	3/16" Screwdriver Tip	4.80
0608410	1mm Desoldering Tip	8.90
0608412	1.2mm Desoldering Tip	8.90
0608415	1.5mm Desoldering Tip	8.90
0606710664	Flat SMD Solder Tip	12.95
060846060102	2mm Tweezer Tip	9.80
060846060105	5mm Tweezer Tip	10.80
060846060115	15mm Tweezer Tip	10.80

WELLER SOLDERING STATION

#1 BEST SELLING STATION

Only $44.99 WLC100

MODELS
WLC 100 / WLC200

- On/off switch with "power-on" indicator light
- Safety guard iron holder
- Natural sponge tip cleaning pad
- Variable power control
- Replaceable heating element
- Quality light-weight pencil iron
- Cushioned foam grip

Part No.	Description	Price
WLC100		
0603WLC100	Complete Station (5 to 40W) *(w/iron and one tip ST3)*	$44.99
0606ST1	Screwdriver Tip .06"	3.60
0606ST2	Screwdriver Tip .09"	3.60
0606ST3	Screwdriver Tip .12"	3.70
0606ST7	Conical Tip .03"	3.60
0603HE40	Replacement Heating Element	15.20
WLC200		
0603WLC200	Complete Station (80W)	$65.00
	(Suitable for Hobby and Stain Glass Applications)	
0606MTG20	Chisel Tip 3/8"	7.80
0606MTG21	Chisel Tip 1/4"	7.80

WLC100

Weller® SOLDERING STATIONS

MODEL WES51 – ANALOG
MODEL WESD51 – DIGITAL

Both stations come complete including base power unit, PES51 soldering pencil with ETA tip and PH50 stand with sponge. Improved connector and plug for easy iron replacement. Applications: Production, rework and repair of through hole and SMT boards.

Model WES51

Model WESD51

- Choice of **ANALOG** or **DIGITAL** models.
- Innovative heater / sensor for rapid heat-up and recovery. Nichrome wound, fiberglass and ceramic insulated heating element.
- Improved connector / plug for easy iron change.
- Iron features non-burnable silicon cord
- Designed for continuous production soldering
- Auto shut-down after 90 minutes of inactivity to prolong tip life and save power.
- Slim, comfortable pencil style iron.
- Wireless temperature lock-out feature for control over assembly process.
- UL and cUL listed, ESD safe, uses ET tips.
- 50W unit, temp range 350 F ~ 850 F

Part No.	Description	Price
0603WES51	Analog Station Model WES51	$99.00
0603WESD51	Digital Station Model WESD51	149.00
0606ETA	Screwdriver Tip .06"	4.00
0606ETC	Screwdriver Tip .12"	4.00
0606ETO	Long Conical Tip .03	4.00
0606ETP	Conical Tip .03	4.00
0606ETS	Long Conical Tip .015	4.95
0606ETKN	Knife Tip 0.18"	4.00
0606PES201	Replacement Ceramic Heater	36.95

Weller® HIGH POWER SOLDERING STATION

DIGITAL – 200W

MODEL WX1011

- Fine, very thin soldering pencil is suited for work under a microscope
- Built in active soldering tip provides dynamic performance
- Capacitive glass touch screen is chemical and temperature resistant
- Turn and click wheel with enter key and finger guide is intuitive to use
- Multi-language menu navigation
- Large graphic LCD display can be viewed from all angles
- Versatile connectivity options - preheaters and fume extraction systems
- Multi-purpose USB port for parameter configuration and data logging
- ESD safe to protect sensitive components
- Uses RT series soldering tips
- Comes with WXMP 40 W soldering pencil and WDH50 stand and RT3 Tip

Part No.	Description	Price
0603WX1011	Complete Station with 40W Soldering Pencil and Stand	$529.00
0605WXMP	Replacement Soldering Pencil	139.00
0605WXMT	Desoldering Tweezer	189.00
RT SERIES TIPS FOR WXMP SOLDERING PENCIL		
0606RT1	Needle tip	34.80
0606RT2	Point tip (0.4mm dia.)	36.60
0606RT3	Chisel tip 1.3 mm x 0.4 mm	36.60
0606RT4	Chisel tip 1.5mm x 0.4 mm	36.60
0606RT5	Chisel bent, 30 0.8mm x 0.4 mm	36.60
0606RT6	Round beveled, 45 1.2mm dia.	36.60
0606RT7	Knife, 45 2.2mm	36.60

Weller® SOLDERING STATION

MODEL WTCPT

- ESD save, static dissipative housing and iron handle.
- Iron stand can be attached either to right or left
- "Magnastat" control system: constant tip temperature of 600 F, 700 F or 800 F depending on the tip.
- Low voltage, closed-loop design protects components that are sensitive to temperature, voltage or current.

Part No.	Description	Prices
0603WTCPT	Soldering Station Complete	$159.00
0603TC201T	Soldering Pencil Only	88.00
0606PTA6	Screw Dr. Tip 600 F, 0.06"	3.50
0606PTA7	Screw Dr. Tip 700 F, 0.06"	3.50
0606PTA8	Screw Dr. Tip 800 F, 0.06"	3.50
0606PTO7	Conical 700 F; 0.03"	3.50
0606PTO8	Conical 800 F; 0.03"	3.50
0606PTR7	1/16" Narrow Chisel	3.50

XYTRONIC SOLDERING STATION TEMPERATURE CONTROLLED

MODEL LF369D

- High quality ceranic heating element
- Adjustable temperature 302 F to 896 F
- Rapid heat-up and recovery
- Heater and sensor fail notification

Part No.	Description	Price
0603XYLF369D	Soldering Station Complete	$56.95
060644510601	Conical Tip Spare	3.50

RSR SOLDERING STATION

W/ DIGITAL MULTIMETER AND DC POWER SUPPLY

MODEL ZD-8901

Model ZD-8901 is a multi-functioning test equipment. it features full lcd display with LED background, digital multimeter, adjustable voltage/ current power supply, and temperature controlled soldering station. A perfect tool for schools, laboratories, and technicians to do general purpose PC assemby.

Technical Specifications:
ROHS Compliant/ESD Safe Equipment

DIGITAL MULTIMETER:
DC Voltage:200mV/2000mV/20V/200V/500V +/- (0.5%+2)
AC Voltage:200V/500V
DC Current:200uA/200mA/10A +/-(1.2%+10)
Resistance:200 /2000 /20K /200K /20M +/- (0.8%+2)
Battery Test: 1.5V/9V/12V +/-(2.5%+2)
Diode: Yes
Low Battery Display: Yes

POWER SUPPLY:
Adjustable Voltage Output - 1.5V - 15V
Adjustable Current Output - Max 1A

Part No.	Description	Price
0603ZD8901	Solder Station w/ DMM and Power Supply	$175.00
060388416A	Spare Solder Iron	$8.95
0606791916	Spare Conincal Tip	$1.20
0606791926	Spare Chisel Tip	$1.20

RSR SOLDERING STATION

- Compact and Easy to Use
- 48W Temp. Control
- Adjustable Temperature Range: 320° to 970°F

MODEL ZD-8906L

MODEL ZD-8906

Part No.	Description	Price
0603ZD8906	Solder Station	$17.95
0603ZD8906LCD	Solder Station w/ LCD	$29.95
0603ZD200C	Spare Soldering Iron	$7.95
0606793111	Spare Conincal Tip	$1.20
0606793131	Spare Chisel Tip	$1.20

RSR SOLDERING STATION

W/ TEMPERATURE CONTROL AND LCD DISPLAY

MODEL ZD-931

Excellent Station for hobbyist, student lab work, and general purpose PC board assembly

Features:
- ROHS Compliant/ESD Safe Equipment
- Temperature Range: 300° to 840°C
- Soldering Iron:48W
- Detachable Soldering Stand w/ Sponge
- Size/Weight: 7-3/4"(W) X 3-1/2"(H) X 6-1/2"(D) / 4.4lbs

Part No.	Description	Price
0603ZD931	Solder Station w/ tip	**$59.95**
060388201A	Spare Solder Iron	**$8.95**
0606791116	Spare Conincal Tip 1mm	**$1.20**
0606791146	Spare Chisel Tip 2mm	**$1.20**

RSR LEAD-FREE SOLDER POT

MODEL ZD-70505

- Made w/ Anti-Erosion and Heat Resistant Alloys
- Pourer Rating: 250W
- Temperature Range: 390° to 895°F
- Melting Time: 8mins
- Max Solder Weight: 800gms
- Solder Pot Size: 80mm diag.

Part No. 0603ZD70505 • Price: $27.95

SMOKE/FUME ABSORBER

ECONOMY MODEL

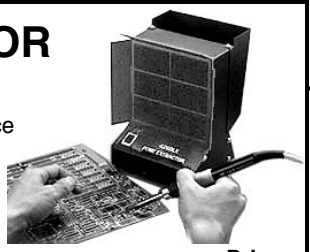
- Removes noxious fumes
- Easy to replace filter
- ESD safe

Part No.	Description	Price
0608ZD153	Table Top Model	$29.95
0608ZDCLMP	Table Clamp Model	36.95
0608797201	Replacement Filters (3 PK)	3.95

XYTRONIC® FUME EXTRACTOR

MODEL 426DLX

Removes noxious fumes. Easy to replace activated carbon filter. Reflector hood increases high efficiency. 22 watt, air flow: 115 CFM. ESD safe.



Part No.	Description	Price
0608426DLX	Fume Extractor	$43.95
06763313010	Replacement Carbon Filters (3 per pk)	5.00

XYTRONIC® FUME EXTRACTOR & SOLDER STATION COMBO

- Improves work environment. Removes smoke and fumes
- Adjustable, temperature control station
- High quality insulated ceramic heater
- Fast heat up
- Temperature range 500 –800 F (250 –430 C)
- 45W iron
- 95–115 CFM air volume
- Reflector hood directs air to extractor

Part No.	Description	Price
0603456DLX	Fume Extractor and Solder Station	$75.95
06763313010	Replacement Carbon Filters (3 per pk)	5.00
0606BOIJP	1/32 Replacement Tip	4.50
0606B01JP	1/32" Conical Tip	4.95
0606B02JP	1/32" Chisel Tip	4.95
0606B04JP	1/16" Chisel Tip	4.95

Weller® FUME ABSORBER

MODEL WSA350

The WSA350 removes flux fumes from the benchtop by drawing the smoke through an activated carbon filter. The WSA350 can process up to 1.37 cubic meters of air per minute. This makes this unit ideal for lead-free soldering which due to more active fluxes give off more fumes. The collector can be easily adjusted to multiple positions, optimizing its fume-absorbent performance. One WSA350F filter included.

TECHNICAL SPECIFICATIONS

Voltage: 120VAC
Air Consumption: 87-107 CF
Sound Level: 45-50dB (A)
Power Consumption: 20W
Absorption Capacity: 1.25m³/min. (50Hz) to 1.37m³/min. (60Hz)

ESD save / UL and cUL Listed

Part No.	Description	Price
0603WSA350	Fume Absorber	$59.99
0603WSA350F	Activated Carbon Replacement Filter (3-pack)	6.70

SOLDERING STATION

ECONOMY MODEL

- Temperature controlled station
- Power On LED indicator
- 48W heater power
- Temperature range: 310 F – 840 F

Part No.	Description	Price
0603ZD98	Solder Station	$15.25
0606793111	Tip Conical	0.95
0606793141	Tip Chisel	0.95

RSR SOLDERING STATION

ECONOMY MODEL

MODEL ZD-99KM

Features:

- Temp controlled station
- 48W Heated Power
- Temperature Range: 310° to 840°F
- **ZD-99KIT** Comes w/ Helping Hand, Magnifier, Desolder Pump, Solder Aid Kit, Solder (10gm), Two Tips

MODEL 0603ZD99KIT

Part No.	Description	Price
0603ZD99	Solder Station w/ tip	$15.95
0603ZD99KIT	Station w/ All Accessories	$26.95
0606793111	Spare Conincal Tip	$1.25
0606793141	Spare Chisel Tip	$1.25

SOLDERING STATION

WITH DIGITAL DISPLAY

- Perfect for general purpose, board level assembly and repair. ESD safe.
- Temperature sensor located near tip allows rapid response.
- Tip temperature can be changed from 320 F to 900 F.
- LED temperature display.
- Heating element 24V AC; 48W
- Detachable soldering iron

Part No.	Description	Price
0603ZD929C	Soldering Station W/Display	$55.95
060588201B	Spare Soldering Iron	7.95
0606791146	Chisel Tip	0.95
0606791116	Conical Tip	0.95

Weller® SOLDERING STATIONS

MODEL WD1002 – WITH 80W IRON
MODEL WD1001 – WITH 65W IRON

- Its extensive menu allows access to special functions including temperature offset, F/ C conversion, time and temperature setback and temperature standby
- User is able to preset frequently used temperature settings
- Operator lockout feature, secured by a 3-digit code, allows user to restrict temperature setting within a pre-determined range.
- Temperature range of 150-850 F 9 F
- 80W station iron features a unique silver heating element and tip that allows heat to pass directly into the tip
- 65W station micro soldering iron has its heating element built into its handle rather than in the tip
- Features three front panel “radio buttons” and two “up/ down” scroll keys that allow quick simple programming
- Both stations come with power unit, detachable soldering iron and tip, LTB .094" chisel tip for 80W iron and NT1 .010" micro tip for 65W iron, 4-position tilt stand for iron, tip-cleaning sponge, power ON/OFF switch and 3-wire power cord.

Part No.	Description	Price
0603WD1002	Soldering Station W/ 80W Iron	$343.00
0603WD1002T	Solder Station w/80W Iron & WDH10T Stand	374.00
0603WD1001	Soldering Station W/ 65W Iron	299.00
0605WSP80	Replacement 80W Iron	129.00
0605WMP	Replacement 65W Iron	122.00
0603WD1	Replacement Power Unit	210.00
0603WDH20	Replacement Holder/Stand	35.50

Weller® REWORK STATION DIGITAL

MODEL WR2000X

DXV80 with 80 watt desoldering pencil uses DX series tiplets

- Self-contained air and vacuum
- Economy (ECO) button for "Sleep mode"
- Programmable temperature presets for imediate temperature selection
- 2 Independent tool channel with automatic tool recognition
- Simultaneous use of 2 tools (up to maximum 300W power rating of the unit)
- Dimensions: 10.75"L x 9.25"W x 4.02"H
- Power supply voltage: 120V (Input); 24V (Output)
- Power consumption 300 Watts

Part No.	Description	Price
0603WR2000X	Digital Re-work Station	$1,207.00

XYTRONIC HOT AIR SMD SOLDER STATION

DIGITAL DISPLAY

MODEL 852D

- Digital display reads temperature C
- Unit comes complete with four popular nozzles, plus five different styles high precision, anti-magnetic stainless steel tweezers and IC extractor
- Adjustable airflow
- Self-contained air source (no need for shop air)
- ESD safe
- Auto cool-down

Part No.	Price
0608852D	$229.00

Weller® SOLDERING STATION

HIGH POWERED 200W DIGITAL WITH TWEEZERS

MODEL WX2021

- Fine, thin WXMP soldering pencil is suited for work under a microscope
- WXMT tweezers are ideal for soldering and desoldering small SMD parts
- Temp range 150 to 850
- Capacitive glass touch screen is chemical and temperature resistant
- Turn and click wheel with enter key and finger guide is intuitive to use Multi-language menu navigation
- Large graphic LCD display can be viewed from all angles
- Versatile connectivity options - preheaters and fume extraction systems
- Multi-purpose USB port for parameter configuration and data logging ESD safe to protect sensitive components
- Come with WXMP soldering pencil. WXMT soldering tweezer and two soldering stands
- WXMP uses RT series tips and WXMT uses RTW series cartridges

Dimensions 16.142" x 12.402" x 15.945"

Part No	Description	Price
0603WX2021	Soldering Pencil, Desoldering Tweezer & Two Stands	$900.00
0605WXMT	Replacement Desoldering Tweezer	189.00
0606RTW1	Conical; 0.2 mm, 45	68.13
0606RTW2	Conical; 0.7 x 0.4 mm, 45	68.13
0606RTW3	Blade; 3.0 x 0.7 mm, 45	80.85
0606RTW4	Blade; 6.0 x 0.7 mm, 45	80.85

velleman

LOW-COST SOLDERING STATION

MODEL VTSS5U

Velleman's low cost soldering station features manual temperature setting, electronic temperature contron and power-on LED indication with ground output.

Technical Specifications:

- 50W heater power for soldering iron
- **Temperature Range:** 374 – 896 F
- **Voltage Supply:** 115 VAC
- **Input Power:** 50VA Max
- **Weight:** 2.65 lbs.
- 1 year limited warranty

Part No.	Description	Price
0603VTSS5U	Soldering Station	$17.95
0606BITS5	Spare Tip	1.20

XYTRONIC® LEAD-FREE SOLDER AND DE-SOLDER STATION

MODEL LF-8800

Includes DLX420 Fume Extractor

TWZ90 *(Opt.)*

- Dual Digital Temperature Displays
- Temp range 150-480 C (302-896 F). Tip temp accurate to within 3 C (6 F)
- Spike free circuitry – zero voltage switching and fully grounded design makes this unit safe for electro-sensitive devices
- Electronic temp control – adjustable temp without having to change tips
- Sensor fail notification
- Includes both soldering iron and desoldering iron
- Self-contained vacuum pump, no shop air needed
- Optional accessories include surface mount tweezer iron and hot-air pencil for small SMD, SOT rework
- Heater power 100 Watt (soldering) and 100 Watt (desoldering)

Part No.	Description	Price
0603XYLF8800	Solder and De-Solder Station	$395.00
0603TWZ90	Opt. SMD Rework Tweezers	76.00
0606710661	Replacement 1/16" Tip	4.80
0606710654	Conical 1/64" Tip	4.80
0606710663	3/16" Screwdriver Tip	4.80
0608410	1mm Desoldering Tip	8.90
0608412	1.2mm Desoldering Tip	8.90
0608415	1.5mm Desoldering Tip	8.90
0606710664	Flat SMD Solder Tip	12.95
060846060102	2mm Tweezer Tip	9.80
060846060105	5mm Tweezer Tip	10.80
060846060115	15mm Tweezer Tip	10.80

XYTRONIC® REWORK SOLDERING STATION

SMD AND MULTI-FUNCTION SYSTEM

- **Soldering:** 80W – Iron and tweezers; Temperature range 302 – 896 F
- **SMD Rework** 600W; Temperature range 212 – 896 F; Air flow capacity 1.5 L/min – 28 L/min
- **Desoldering** 100W; Temperature range 572 – 842 F
- Includes all the irons and stands shown above

Part No. 0603XYLF853DTP • Price: $695.00

XYTRONIC® LEAD-FREE HIGH POWER SOLDERING AND DESOLDERING STATION

MODEL LF-7000

- **ENERGY SAVER:** Automatically powers down after 15 minutes of idling (as indicated by the Pause LED) saving power while extending tip life. Power is restored by picking up the required handpiece.
- **DELAYED SUCTION:** Pump will continue sucking for 1-2 seconds after actuator is released, clears the tubes and prevents clogging of the tip.
- **ANALOG VACUUM GAUGE.** Helps to diagnose suction problems with the desoldering unit.
- Individual Stands with built-In Tip Cleaner: Individual stands can be place close to your work while the control unit can be out of the way of your work. The built-in tip cleaner has been proven to be the most effective on the market.
- **COMBO UNIT:** Integrates the solder and desoldering functions into one, space saving, top quality system.
- **NICHROME ELEMENT:** Solder wand is our ergonomic mini-handle designed for comfort and ease of use.
- **FRONT CALIBRATION PORTS:** Located under the precision temperature controls for precise calibration.

STANDARD FEATURES:

- **TEMPERATURE STABILITY:** Tip temperature accurate to within 3 C (6 F)
- **SPIKE FREE CIRCUITRY:** Zero Voltage switching and fully grounded design makes this unit safe to electro-sensitive devices.
- **ELECTRONIC TEMPERATURE CONTROL:** Adjustable temperature w/o changing tips.
- **VACUUM SWITCH:** The pump is controlled by a finger actuated, thyristor switching circuit located on the desoldering handle.
- Soldering and desoldering temperature restore is controlled by a movement actuated IC in the handle of each unit.
- **IRON ASSEMBLIES:** Detachable solder (new ergonomic mini-handle) and desolder wands for ease of use and repair.
- **PUMP:** A self-contained vacuum pump engineered to provide continuous, maintenance free operation.
- **ISOLATED POWER SUPPLY**: Powered by a high quality 32VAC transformer.

Part No. 0603XYLF7000 • Price: $335.00

XYTRONIC DESOLDERING STATION

MODEL LF-6000

Electronic temperature control. ESD safe. Digital display is switchable from Centigrade / Fahrenheit. High rework accuracy for removal of through-hole components. Thyristor circuit enables finger tip pump action. 80 watt heater.

HAP80
Optional
Hot Air Pencil

- **TEMPERATURE STABILITY:** Tip temperature accurated to within 3 C (6 F)
- **SPIKE FREE CIRCUITY:** Zero Voltage switching and fully grounded design makes this unit safe on electro-sensitive devices.
- **VACUUM SWITCH**: Suction is controlled by a finger actuated thyristor circuit located for ease of operation on the desoldering handle.
- Does not require shop air. Internal vacuum pump design.
- Dual filtration, anti-clog feature.
- Large, digital display. Switchable C/F.
- Temperature control without changing tips. **Range:** 150–450 C, 300-850 F.
- Low tip leakage, zero voltage switching.
- Energy saver feature – auto power down after 15 minutes idle saves on power and tip life.
- Extended suction – pump continues sucking 1–2 seconds after actuator released, helping to clear tubes and prevent clogging of tip.
- *Optional:* Hot air pencil for SMD.
- Unit comes complete with 80 watt wand with standard .048" tip.
- **Weight:** 15 lbs.

Part No.	Description	Price
0603XYLF6000	Desoldering Station	$295.00
06DIA80	Replacement Desoldering Iron	65.00
0608410	1mm Desoldering Tip	8.90
0608412	1.2mm Desoldering Tip	8.90
0608415	1.5mm Desoldering Tip	8.90
0608HAP80	Opt. Hot Air Pencil	65.00

GLOBAL SPECIALTIES SURFACE MOUNT SOLDERING & REWORK TOOL KIT

The set includes 11 tools commonly used for working with surface mount components, such as anti-static tweezers with replaceable tips, suction pen with 3 different sized tips, soldering iron and magnifier. The kit comes complete in a convenient molded plastic case, also can be used to attach surface mount components to Global's GSPA-K1 and GSPA-K2 surface mount adapter kits.

Part # 06GSTSMT1 • Price: $75.00

XYTRONIC SMD REWORK STATION

TEMPERATURE CONTROLLED

MODEL LF-528D

- High performance, inexpensive, versatile
- Easy to operate for replacement of surface mount devices, can be used for dual-in-line components also.
- Adjustable temperature: 250 C ~ 450 C, 482 F ~ 842 F
- Thermocouple sensor for stable temperature
- Long life ceramic heating element
- Rapid heat up and recovery
- Comes complete with base power unit, sponge, stand, surface mount tweezer iron and stand for tweezer
- 40 watt station, 25 watt ceramic element

Part No.	Description	Price
0608SMD528D	Rework Station	$79.00
060846060102	2mm Tweezer Tip	9.80
060846060105	5mm Tweezer Tip	10.80
060846060115	15mm Tweezer Tip	10.80

Weller® HOT AIR REWORK SYSTEM

MODEL WHA3000PS

- Contains WHA3000P 700 Watt hot air station, WBH 3000S circuit board holder with pivoting stand, WHP3000 heating plate.
- WHA3000P: Hot air station (700W) with patented Weller nozzle technology for max. process control and user friendly operation. The powerful variable speed controlled turbine generates an air volume of up to 50 liters/min.
- WHB3000S: Circuit board holder with a pivoting stand for hot air pencil (HAP3000). Circuit boards up to 310mm x 320mm can be accommodated.
- WHP3000: The IR heating plate has a total heated air of 120mm x 190mm with 3 ceramic elements. The plate is used to preheat the circuit board under repair, to reduce the possibility of thermal damage.
- See out website at http://www.elexp.com for other accessories and nozzles.

Part No. 0603WHA3000PS • Price: $6,480.00

BASIC SOLDERING KIT

ECONOMY MODEL, COMPLETE WITH TOOLS, INSTRUCTIONS AND PROJECT KIT

A one-stop-shop for everything needed to learn or improve fundamental soldering skills. Save by getting large volume pricing on all the individual items contained in this all in one convenient package.

Product Features:
- Temperature controllable solder station
- Safety goggles
- Mini long nose pliers
- Diagonal cutter
- 4-piece solder aid kit
- 7-in-one hand tool stripper/cutter/crimper
- Solder sucker
- Fun lights solder practice kit
- Soldering techniques pamphlet
- Resistor and capacitor color code guide
- Solder tube (lead free)
- Helping hand with lens
- Packed in convenient cardboard box

Part No.	Description	Price
32BASSLDR	Basic Soldering Kit	$36.95

CHIPQUIK™ SMD REMOVAL KIT

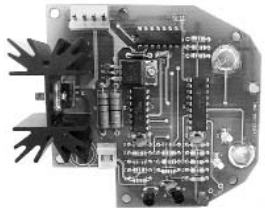
SAFELY REMOVE SURFACE MOUNT DEVICES USING LOW HEAT

Fast and easy to use. Simply apply flux to all leads of the SMD. With a soldering iron or warm air bath melt the special desoldering alloy on all of the leads. The combination of existing solder plus the special alloy melts at less than 200 F and remains molten long enough for removal of SMD using tweezers or pickup tool. Clean off pads using flux and a swab, then install new device. Each kit provides enough product to remove between 8–10 SMDs (approximately 1250–1500 leads). Kit includes: low temperature (136 F) desoldering alloy, a syringe with RMA flux, and alcohol pads. Special desoldering alloy and flux also available in industrial production sizes.

Part No.	Description	Price
0608SMD1	Chip Quik Surface Mount Device Removal Kit	$17.50
INDUSTRIAL PRODUCTION SIZES		
0608SMD16	Desoldering Alloy – 16 Ft Industrial Pack Size, 6.5" Lengths	89.95
0608SMD32	Desoldering Alloy – 32 Ft. Industrial Pack Size, 6.5" Lengths	168.00
0608SMD291	10cc Syringe, 20G No Clean Paste Flux	14.95

DE-SOLDERING / SOLDERING "REWORK" TRAINING KIT

ECONOMICAL, FLEXIBLE TRAINING CONCEPT



Also Included

Unique, inexpensive method of teaching de-soldering **and** soldering. Kit is designed around an assembled, power controller interface circuit board that is fully populated with components like Hitachi quad comparators and quad op amps. Approximately 50 components and hardware items, all being DIP (through hole) style. Other semis include, but are not limited to an 8-bit PIC Micro-C and some IRLZ34 N-channel Enhancement Mode Logic Level TrenchMOS transistors. In addition, there are resistors, caps, some unique style red, green and even bi-polar LED's, switches, a buzzer, connectors, heatsink and more. Kit includes circuit board with case, instruction manual, de-soldering pump, 5 ft. de-solder braid, soldering iron, 10 gm. solder, iron stand and sponge. After removing parts, "Re-Work" the board by soldering them back! Instruction manual includes technical tips on both de-soldering and soldering.
- Cost-effective method of teaching both de-soldering ***and*** soldering
- Work with an actual finished product (not a hobby) circuit board
- Beginner students can de-solder (and re-work) one section of the board at a time
- Tutorial manual with de-soldering and soldering tips
- Approximately 50 components/hardware on board, additional boards available
- Inherent components parts value
- Contains circuit board, de-solder pump, de-solder braid, soldering iron, solder stand and sponge and solder (10gm), tutorial manual
- Additional boards available

Part No.	Description	Price
32REWORK	Desolder/Solder Training Kit	$12.95
ACCESSORIES		
32STTH757	Extra Board for REWORK Kit	5.10
060821	Extra Tip for De-Solder Pump	0.85
060370	Optional Safety Goggles	1.90
060800	Extra 5' Desolder Braid	0.95
060848	Electric Desoldering Tool	28.50
060702	1 lb. Solder Roll	15.90
060830	4 Piece Solder Aid Kit	2.95
060836	Helping Hand and Magnifier Set	3.95

XYTRONIC® SMD SOLDER/DE-SOLDER TWEEZERS

Provides fast, efficient method of soldering and desoldering Surface mount Devices.
- 120VAC (UL) input.
- High insulation ceramic elements for rapid heat-up and recovery.
- May be used with chip caps, chip resistors, SOT, flat pack IC's, SOIC, DIP.
- Includes 2mm standard tip.
- Includes solder stand and sponge

Part No.	Description	Price
0603TWZ236	SMD Tweezers	$54.95
060846060102	2mm Tip	9.80
060846060105	5mm Tip	10.80
060846060115	15mm Tip	10.80

XYTRONIC

FUME EXTRACTION SYSTEM

MODEL HV-2E

INDUSTRIAL GRADE, DUAL EXTRACTION UNIT

Main Unit With Casters

Featuring two extraction arms with funnels, this system provides fume extraction for up to two workstations. The flexible extraction arms are 7 ft. long, each. This system is intended for busy, commercial environments or labs where smaller, desk top units will not suffice. While heavy duty and durable, the unit does offer portability. The main base is equipped with lockable casters and can be easily maneuvered by one person. Unit comes complete with filter set.

Flex hoses illustrated extracting fumes from two different solder stations. Either one or both hoses may be used.

- Dual extraction. Two 7 ft. extraction arms (hoses), with 6 " funnel terminations
- Internal pump: brushless, maintenance free centrifugal fan motor
- Air flow: 175m3/hr. per 75mm arm
- Quiet operation. Noise level: <50dB
- Long-lasting filter. When used for about 8 hours a day, filter will last 4 to 6 months
- **Dimensions:** 12" x 12" x 16 " (ht. with casters). **Weight** 36 lbs.

Part No.	Description	Price
0603XYHV2E	Model HV2E dual fume extractor	$595.00
060376A33001	Replacement carbon/HEPA filter	165.00

XYTRONIC

SOLDERING IRON THERMOMETER

CHECKS TIP TEMPERATURE

MODEL 191

- Fast, accurate tip temperature measurements using a fine CA sensor
- Special metal alloy coating resists corrosion and oxidation
- LCD digital display readout, 9V battery operation
- Uses K(CA) type thermocouple

Part No. 0603XY191 • Price $145.00

velleman

THREE-IN-ONE LAB UNIT

MODEL LAB1U

Your space-saving lab solution! 1 multimeter, 1 power supply, 1 soldering iron. This unit covers 99% of your home lab needs. Prefect solution for starters or schools. Separate transformer for power supply and soldering iron. Battery powered DMM for complete isolation.

SPECIFICATIONS

Digital Multimeter:
- 3 1/2 backlit LCD
- Automatic polarity indication
- DC voltage: 200mV to 600V in 5 steps
- AC voltage: 200V and 600V
- DC current: 200 A to 10A in 5 steps
- Resistance test: 200 ohm to 2Mohm
- Diode, transistor and continuity test
- Data-hold function and buzzer
- CATI 600V
- CATII 300V

Regulated Power Supply:
- Selectable output voltages: 3 - 4.5 - 6 - 7.5 - 9 - 12Vdc
- Output: 1.5A (2A peak)
- LED overload indication
- With output on/off switch
- Very low ripple
- LED power indication

Soldering Station:
- Low-voltage iron: 24V
- Ceramic 48W heating element with temperature sensor
- Temperature range: OFF - 150 - 450 C
- Lead-free soldering possible
- Supplied with sponge and spare bit

Includes: Test leads for DMM, user manual, sponge, spare bit for soldering iron, 9V battery for DMM, mains cable.

Part No. 01LAB1 • Price: $132.95

Weller®

SOLDERING GUN

THERMA-BOOST

MODEL TB100

Soldering gun model TB100 can be used for a wide variety of jobs including soldering, cutting and shaping.

Product Details
- Thermal-Boost trigger gives added burst of power
- Heats up to working temperature in just 45 seconds
- Ultra-lightweight – weighs 3 oz.
- Wattage: 130W / 30W
- Temperature Range: 950 F / 850 F
- Kit includes heat tool, stand, 6 multi-use tips and instructions
- UL and cUL listed

Part No. 0603TB100 • Price: $23.20

Weller® SOLDERING GUNS

MODEL D550 (200/260 WATTS)
MODEL D550PK
MODEL 8200 (100/140 WATTS)

- Heavy Duty Gun
- Highest output gun w/2-position trigger selection of dual heats
- Twin light illuminates work
- Heavy gauge, high efficiency
- 2 wire cord, UL listed

MODEL D550PK

Kit includes D550 soldering gun with 1 soldering tip, 1 smoothing tip, 1 cutting tip, flux brush, soldering aid tool and coil of lead free solder packaged in plastic case.

MODEL 8200PK

Kit includes 8200 gun, 1 soldering tip, 1 sealing tip, 1 cutting tip, solder and plastic carrying case.

Part No.	Description	Prices
0603D550	Model D550	$52.00
0603D550PK	Model D550PK Kit	60.00
06038200	Model 8200	38.30
06038200PKIT	Model 8200PK	44.90
06037135W	Standard Tips 2/Card For 8200	5.00
06037250W	Standard Tips 2/Card For D550	5.00

Weller® HIGH POWER SOLDERING GUN

300 WATTS IN HIGH TRIGGER POSITION
200 WATTS IN LOW TRIGGER POSITION
MODEL D650

- Reliable new industrial-quality tool
- Features nickel-plated copper secondary, heat-resistant thermoplastic housing.
- Heavy-duty grounded cord.
- Wide selection of soldering, cutting and smoothing tips available.

Part No.	Description	Price
0603D650	D650 Soldering Gun	$71.00
06037250W	Standard Tips 2/Card	5.00

Weller® SOLDERING GUN

GENERAL PURPOSE – (75W)

INCLUDES CASE, TWO TIPS & COIL OF SOLDER

MODEL 7200PK

Type 7200PK

- Standard lightweight economy model
- Produces 75 watts
- Fingertip trigger for instant heat
- Gun can be placed on its back when not in use
- Small and lightweight
- Available with 2 soldering tips
- 2-wire cord
- UL listed

Part No. 06037200PK • Price: $31.50

HEAT GUN

MODEL RD 7346B

- Deluxe 2 temperature
- 1200W
- Range 1000 F and 600 F with hanging hook

Part No.	Description	Price
0605RD7346B	Heat Gun	$37.50

HEAT GUN

MODEL ZD-508

- 1500W, Rapid heat up
- Range: 650° to 930°F
- Useful for heat tubing and paint removal

Part No. 0605ZD508 • Price: $22.95

Weller® HEAT GUNS

MODEL: 1095

- Dual temperature, economical model
- Applying heat shrinking products
- Curing epoxy and softening adhesives
- Heating liquids and stripping paint
- 1000 W max, 3-wire grounded plug

Part No. 06051095 • Price: $61.00

MODEL: 6966C

- Assembly and repair applications in production plants and labs
- Shrink tubing and vinyl/TFE
- Reflow soldering and encapsulation
- Epoxy curing, drying and cooling
- Approximately 750 F to 800 F hot air at nozzle
- 3-wire grounded plug 6 foot cord, UL-Listed

Part No. 06056966C • Price: $129.00

PORTABLE SOLDERING IRONS

Weller® PORTASOL®

MODEL PSI-100

The PSI-100 self-igniting portable butane heat tool can solder, heat shrink, cut rope, as well as perform other open-flame operations. Because it allows anti static soldering, it is ideal for service technicians in industries such as electronics, avionics, cellular communications, alarm systems, marine and automotive.
Temperature is fully adjustable up to 1,076 F. The PSI-100 will run for up to two hours on a single refill.

MODEL PSI-100K

The PSI-100K kit includes the iron, sponge, stand and extra tips in a durable blow molded box.

NOTE: Butane-filled products are strictly forbidden on passenger aircraft in both the carry-on and checked baggage

Part No.	Description	Price
0605PSI100	Portasol	$72.00
0605PSI100K (Kit)	Portasol Kit	95.00
0605PSI2	Soldering Tip 3/32 Single Flat	12.00
0605PSI9	Hot Blower Tip	12.00
0605PSI10	Hot Knife Tip	12.00

Weller® MAGNA-LITE BUTANE TORCHES

MODEL ML100 – MICRO TORCH
MODEL ML200 – TABLE TOP TORCH

ML100

ML200

- Piezo electronic ignition system
- Adjustable flame height
- Refillable with Weller WB1 or WB2 filtered butane
- Up to 60 minutes continuous use, controls flame temperature up to 2,400 F ***(ML200 only)***
- Blue LED light (***ML100 only)***
- Nozzle cover prevents accidental ignition ***(ML100 only)***
- Child safety lock meets CPSC guidelines ***(ML200)***

APPLICATION

- For heat shrink tubing, fusing rope ends, frozen locks, camping
- Also for first aid, labs and boating

NOTE: Butane-filled products are strictly forbidden on passenger aircraft in both the carry-on and checked baggage

Part No.	Description	Price
0603ML100	Butane Micro Torch	$9.40
0603ML200	Butane Table Top Torch	24.80

ISOTIP SOLDERPRO 50

CORDLESS – BUTANE SOLDERING IRON

- Includes soldering iron, conical tip, protective cap with igniter and instructions.
- Compact size – 5.5" with tip (6" with cap)
- Wind and weather resistant.
- Up to 30 minute run time.
- See-through fuel window.
- 410 F – 750 F temperature range.
- Ready to use within 10 seconds of ignition.

NOTE: Butane-filled products are strictly forbidden on passenger aircraft in both the carry-on and checked baggage

Part No.	Description	Price
06057971	Solderpro 50	$23.50
06067992	Conical Tip #7992	10.95
06067992-001	Chisel Tip # 7992-001	10.95

Weller® PORTASOL® SOLDERING TOOL KIT

MODEL P2KC

Cordless self-igniting soldering tool kit. Comes with PPT6 soldering tip, PPT9 hot air tip, PPT10 hot knife tip, PPT11 hot air deflector tip, PPT12 flame tip. Storage case with tool holder and instructions.

NOTE: Butane-filled products are strictly forbidden on passenger aircraft in both the carry-on and checked baggage

Part No.	Price
0605P2K	$68.00

For extra tips see Accessory Tips below

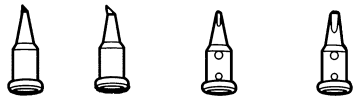
Weller® BUTANE SOLDERING IRON

MINIATURE

Allows you to solder on those field emergencies when electric power is not available. Adjustable power control develops a maximum temperature of up to 850 F, equivalent of 10 to 60 watts. Iron (uncharged) comes complete with a 3/32" chisel tip and pen-like cap with igniter. 6" long.

NOTE: Butane-filled products are strictly forbidden on passenger aircraft in both the carry-on and checked baggage

ACCESSORY TIPS



PPT1 PPT2 PPT5 PPT6

Part No.	Description	Price
0605P2C	Butane Iron P2C	$42.70
0606PPT1	1/32" Single Flat Tip	9.40
0606PPT2	3/32" Single Flat Tip	9.40
0606PPT5	1/32" Double Flat Tip	9.40
0606PPT6	3/32" Double Flat Tip	9.40

Weller® BUTANE MINI SOLDERING PENCIL

WITH PIEZO IGNITION

MODEL ML500MP

Weller's ***Model ML500P*** is a portable soldering pencil. You fuel the piezo-ignition soldering iron with standard lighter butane. The adjustable flame allows you to set the tip to between 750 and 900 degrees. You can get up to 30 minutes of operation on a medium setting and when you remove the tip, the ML500P functions as a small torch.

- Piezo electronic ignition system
- Adjustable gas flow valve
- Tip temperature 750 – 900 F
- Refillable with Weller WB1 or WB2 filter butane
- Use for soldering, heat shrink tubing, electrical and electronics.
- ML501 tip supplied with soldering pencil

Part No.	Description	Price
0603ML500P	Soldering Pencil w/Piezo Ignition	$17.70
0606ML501	Solder Tip	3.30

Weller®
MARKSMAN IRON

MODEL SP12, 12W
MODEL SP-23L, 25W

Part No.	Description	Price
0605SP12	Iron w/Tip	$14.70
0605SP23	Iron w/Tip (w/Light Indicator)	13.50
0606MT1	Conical Tip 1/8" (SP23L)	2.30
0606MT2	Screwdriver Tip 1/8" (SP23L)	2.30
0606MT3	Chisel Tip 1/8" (SP23L)	2.30
060MT70	Conical, 1/8" (SP12)	4.75

Weller® SOLDERING IRON KITS

MODELS SP23LK / SP40LK

Indicator light shows when iron is on. Kit contains iron, 3 tips, solder and solder aid tool.

Part No.	Description	Price
0603SP23LK	SP23L Iron and MT1, MT2 and MT3 Tips	$19.10
0605SP40LK	SP40L Iron and MT10, ST3 and ST7 Tips	24.80

Weller® SOLDERING IRONS

WP SERIES

- Interchangeable heater elements – single handle plus 3 different heating elements gives you a trio of irons for different jobs
- Quick change knurled collar makes changing heater simple
- All irons come with 3-wire power cord
- Irons use ST series iron plated tips for long life and greater soldering efficiency
- Small light-weight handle now with cushioned grip

Part No.	Description	Price
0605WP25	25W Iron W/ST 3 Tip	$41.70
0605WP30	30W Iron W/ST 3 Tip	45.00
0605WP35	35W Iron W/ST 3 Tip	52.00
0605HE25	Replacement Heater 25 W	22.30
0605HE30	Replacement Heater 30 W	27.10
0605HE35	Replacement Heater 35 W	27.70
0606ST1	Screwdriver Tip .06	3.70
0606ST2	Screwdriver Tip .09"	3.70
0606ST3	Screwdriver Tip .12"	4.75
0606ST4	3/16" Chisel	4.75
0606ST7	Conical Tip .03"	3.70

SOLDERING IRON KIT

Contains iron (30W), solder and stand in an attractive storage box.

Part No.	Price
0605PE30M	$8.90

RSR HIGH PERFORMANCE 3-WIRE IRON

- High quality 25 Watt 3-wire pencil style iron complete with conical tip and rubber sleeve for easy grip. Non-burnable silicon cord. UL listed
- Also suitable for lead free solder

Part No.	Description	1-9	10+
060509	Iron w/Conical Tip	$7.50	$7.30
060607	Conical Tip	0.95	0.85
060608	Chisel Tip	0.95	0.85

RSR ECONOMY 3 WIRE IRONS

MODEL PE-30 – 30 WATT
MODEL PE-40 – 40 WATT

30 Watt and 40 Watt 3-wire pencil style irons with 3-wire plugs. Complete with conical tip and iron stand. UL listed.

Part No.	Description	Price
060512	30W Iron w/Conical Tip	$3.95
060514	40W Iron w/Conical Tip	4.95
060612	Conical Tip For 30W Iron	1.10
060614	Conical Tip For 40W Iron	1.10

RSR SUPER ECONOMY SOLDERING IRON

25 Watt/ 30 Watt super economy iron.

Model 060599

Model 0605ZD200N

Part No.	Description	1-9	10+
060599	Super Economy Iron w/Conical Tip	$4.75	$4.25
060699	Replacement Conical Tip	0.75	0.65
0605ZD200N	Soldering Iron w/ "ETL" listing	4.95	4.50
0606N1	Spare Conical Tip for ZD200N	1.20	0.95

SOLDERING IRON KIT

- 30W soldering iron
- Desolder pump
- Solder
- Iron stand
- 2 screwdrivers

Part No.	Description	Price
0605ZC921B	Soldering Iron Kit	$10.95
0606791HO	Replacement Tip	0.90

Ungar® / Weller®

MODULAR SOLDERING IRONS

PRE-ASSEMBLED

Part No.	Model	Description	Prices
0605SL325	SL325	7400 Handle, 537S Heater, PL111 Tip	$42.00
0605SL335	SL335	7400 Handle, 1237S Heater, PL113 Tip	44.60
0605SL345	SL345	7400 Handle, 4037S Heater, PL133 Tip	47.20

SOLDER•IT

SILVER BEARING SOLDER PASTE

Works with a match or a lighter in addition to soldering irons. 5 times stronger than conventional solder. Simply apply and heat. Allows practically anyone to solder all ferrous and non ferrous materials.

Part No. 06057459 • Price: $5.95

CHIPQUIK™ SOLDER / DESOLDER REWORK KIT

MODEL SMD 2000

- **Solder paste** – no clean rework paste w/flux / 1cc syringe w/nozzle and cap.
- **Paste flux** – no clean / 1 cc syringe w/nozzle and cap.
- **Chip Quik removal alloy** – 4.5 ft. w/instructions.
- **Liquid flux remover** – 5cc container and applicator.
- **Probe kit** – 4 stainless steel dental picks.
- **Solder wick** – no clean / 5 ft.
- **Handi Vac** – pick and place tool / 2 tips
- **Acid brush** – qty 2.
- **Precision tweezers** – for SMD removal and placement.
- **Cleaning wipers** – tight weave / low lint 4" x 4" qty 6.
- **Swabs** – double ended qty 10
- **Alcohol pads** – qty 6
- **Solder** – 3 ft. .031 63/37 2% silver

Part No. 0608SMD2000 • Price: $110.00

XYTRONIC® TIP CLEANER

- Made of low abrasive brass shavings
- No water necessary
- No temperature drop as in conventional sponges.
- Cleans better than conventional sponges
- Heavy duty stainless steel holder
- Rubber foot pad

Be sure to remove excess solder from the tip by thrusting the tip into the Tip Cleaner rather than wiping to avoid unwanted splattering due to the spring like action of the scrubber

Part No.	Description	1-9	10+
0603460	Base and Cleaner	$5.75	5.25
0603459	Replacement Cleaner	2.95	2.75

Weller® THIN SOLDERING IRON – 12W

MODEL WM120

- Lightweight, pencil thin
- For soldering miniature components
- 3 wire grounded plug
- Develops 800 F tip temperature

Part No. 0605WM120 • Price: $42.10

Weller® SOLDERING IRON

HEAVY DUTY 100W

MODEL W100PG

- Closed loop method provides maximum tip temperature
- Portable line voltage iron
- Stainless steel modular plug-in heater
- UL and cUL listed
- Temperature is controlled by tips

Part No.	Description	Price
0605W100PG	Soldering Iron	$54.99
0606CT6F6	Tip – 600 F, 3/8"	7.70
0606CT6F7	Tip – 700 F, 3/8"	6.70
0606CT6F8	Tip – 800 F, 3/8"	6.70

Ungar® MODULAR IRONS

- Modular soldering irons utilize interchangeable handles and tips for custom applications
- Irons have 6 foot cord, UL listed

SOLDERING IRON HANDLES

Part No.	Model/Description	Prices
06037400	3-Wire Grounded Handle	$23.90
06037500	3-Wire Burn Resistant Cord	36.90
06037760	2-Wire RED Handle	17.30

HEATING ELEMENT – FOR THREAD-IN TIPS

Part No.	Model	Description	Prices
0603535S	535S	23W; 700 F; 1/8" thread	$24.50
0603537S	537S	23W, 700 F; 1/4" thread	21.80
06031235S	1235S	33W, 800 F; 1/8" thread	24.50
06031237S	1237S	33W; 800 F; 1/4" thread	23.80
06034035S	4035S	45W; 900 F; 1/8" thread	27.70
06034037S	4037S	45W, 900 F; 1/4" thread	26.20

TIPS FOR THREAD-IN HEATERS

PL331, 331 PL333, 333 PL113

Part No.	Model	Description	Prices
0603333	333	copper alloy chisel; 1/8" thread	2.80
0603PL331	PL331	iron/silver plated pencil; 1/8" thread	5.20
0603PL333	PL333	iron/silver plated chisel; 1/8" thread	4.80
0606PL113	PL113	iron/silver plated chisel; 1/4" thread	5.90

SOLDERING IRON / FAST HEAT

- 24W iron with 130W boost for fast warm up and recovery with momentary push-button switch
- Perfect for PC board soldering and occasional large connection

Part No.	Description	Price
0605ZD70D	Soldering Iron	$8.50
0606791HO	Replacement Tip	0.90

XYTRONIC® VARIABLE TEMPERATURE SOLDERING IRON

MODEL 258

- Phase controlled variable temperature.
- Temperature control on the handle.
- **Range**: 500 –800 F, 260 –430 C
- LED hi-low indicator.
- UL listed.
- Power consumption 16–30W.

Part No.	Description	Price
0605258	Soldering Iron 258	$17.90
0606415404	Standard 1/16" Replacement Tip	4.80
0606415403	1/64" Conical Replacement Tip	4.80
0606415410	3/16" Screwdriver Tip	4.80

Weller® WOODBURNING IRON KIT

MODEL WSB25WB

The 25-watt iron features a short barrel so you can get close to the work and maintain control over detailed work. It contains a wide variety of woodburning tips to create detailed and intricate designs. The project book gives you step-by-step instructions on how to create interesting home decorating projects.

FEATURES

- Tips screw into barrel for easy replacement – no tools required
- The hot knife tip allows you to cut patterns in stencils and foam
- A pattern booklet is included to help you get started with exciting project ideas
- UL and cUL listed
- Weight: 0.88 lbs; 4.25" L x 1.63" W x 9.81" H

Part No. 0605WSB25WB • Price: $19.10

Weller® POLISHING BAR

CLEANS SOLDERING TIPS

- Cleans and renews soldering tips
- Removes plastic resins, oxidation, silicone grease from tip

Part No. 0607WPB1 • Price: $9.00

Weller® HOBBY CRAFT IRONS

MODELS SP40L, SP80L, SP120

40W / 80W / 120W

- Fine quality irons
- Develops 900 F / 482 C
- Stainless steel barrel
- Indicator Light ***(SP40L, SP80L)***
- Heat and impact resistant handle
- Tip included
- UL listed

Part No.	Wattage	Description	Price
0605SP40	40W	Lightweight for hobby & electronic;	$19.10
0605SP80	80W	Medium-duty for hobby, stained glass and mirror repair;	29.20
0605SP120	120W	Heavy-duty for hobby, stained glass and mirror repair	52.00
0606MT10		Tip for SP40L; 1/4" Chisel	8.30
0606MTG20		Tip for SP80L, 3/8" Chisel	7.80
0606MTG30		Tip for SP120, 1/2" Chisel	11.90

Weller® SOLDERING IRON PRO SERIES

- Breakthrough heat-up performance! Heats up to working temperature in just 35 seconds!
- Red power-on LED changes to green when iron reaches working temperature
- Bright white LED illuminates working surface in low-light condition
- Tool is designed to be self-standing; no stand is needed
- Tips use a phono jack and plug for easy tip exchange
- Ideal for electronics hobbies such as PC modding and RC kits
- Develops 900 F (482 C)
- 7 year limited warranty
- UL and cUL listed

Part No.	Description	Price
0605WPS18MP	Soldering Iron Pro Series	$28.10
0605WPS10	Tip Conical, .031" for WPS18	8.50
0605WPS11	Tip Chisel, .125" for WPS18	8.50

Weller® SOLDERING IRON BATTERY POWERED

MODEL BP645MP / BP860MP

- Powerful 6 watt / 4.5 volt iron heats to working temperature in under 15 seconds
- 120 solder joints per set of (3) alkaline batteries
- Nickel-plated copper tip for optimum heat transfer and long life. Replacement tips available
- Hundreds of uses...microelectronics, hobbies, small appliances and more
- Batteries, lead-free solder and tip removal tool included
- 7-year warranty

Part No.	Description	Price
0605BP645	Soldering Iron Without Case	$15.30
0605CMP645	Soldering Iron w/Hard Case	15.25
0605BP860	Pro Version, 8W/11W, 850 F/ 950 F w/4 Alkaline Batteries	20.70

MAGNIFIER LIGHTED

Batteries not included.

Part No.	Description	1-9	10+
0604LMMD465	2 1/2" Dia Lighted, 4X Power	$5.95	$4.95
0604LMMD748	2" Dia. Lighted, 7X Power	6.50	5.50
0604LM7005	2" Dia., without Light, X10	1.95	1.50
0604LM2275	3" Dia., without Light, X5	2.50	1.95

POCKET MAGNIFIERS

10 x power magnification comes with leather case.

Part No.	1-9	10+
0604H901	$12.95	$12.50

SPECTACLE LOUPE – 2X

This amazing, yet economical, optical device will be an instant hit with eyeglass wearing hobbyists everywhere. This 2X loupe fits securely to either the left or right lense with a scratch-proof, plastic coated clip. It gives you the flexibility of a light-weight magnifier that can be used with your own prescription and flipped out of the way for convenience.

Part No.	1-9	10+
0604H899	$8.95	$8.50

BINOCULAR MAGNIFIER

Ideal for detailed work over long periods. Adjustable headband. 2 1/2 x magnification.

Part No.	1-9	10+
0604H910	$18.90	$17.90

INSPECTION MIRROR

- 1 1/2" diameter round mirror, 360 rotation.
- Cushion grip.
- See in hard to reach places.

Part No.	1-9	10+
0604IM	$2.50	$2.25

FLEXIBLE MAGNIFIER

- X2 magnification
- 4 1/2" diameter

Part No.	1-9	10+
0604MC205	$8.95	$8.50

ECONO EAR MUFF

Lightweight, 6 oz. NRR of 23db. Limits sound in noisy environment.

Part No. 060374100 • Price: $10.95

RSR

HELPING HAND

Third hand for soldering, gluing, painting, and repairing. Great for holding PC boards. Adjust to any position or angle.

Part No.	Description	1-9	10+
060834	Helping Hand (w/o magnifier)	$3.50	$2.95
060836	Complete Set (Helping Hand/Magnifier)	3.95	3.50

HELPING HAND WITH MAGNIFIER & STAND

Figure 1

Figure 2

Heavy duty helping hands with 90mm magnifier. With sponge and soldering iron stand.

Part No.	Figure	1-9	10+
060838	1	$6.95	$5.95
060833	2	$7.50	$6.50

DELUXE MAGNIFYING LAMP W/ 45" EXTENDABLE ARM

- 45" extendable steel arm.
- 5" dia. lens with x3 magnification.
- 22W fluorescent lamp.
- Metal cover.

Part No.	Description	1-9	10+
060439100	Magnifying Lamp	$58.00	$54.00
0604MLBULB	Replacement Bulb	7.50	7.25

MAGNIFIER LIGHTED TABLE MODEL

- Lens size 3.5"
- 3 / 8 diaopter
- 11W fluorescent lamp
- Black color

Part No. 0604ZD123 • Price: $15.90

KLIP-ON LIGHTED, MAGNIFIER

Extra heavy-duty 2" clamp easily secures this unit to a desk, workbench, over-head cabinet or shelf. Detaches and attaches quickly and effortlessly. Super-bright "Daylight" 13W long-lasting fluorescent bulb and 3X lens (3.5" diameter) with dust cover. 12" flexible gooseneck directs unit in any direction. Unlimited applications for home, office or workbench.

Part No.	Description	Price:
0604LX200	LX200 Lamp	$26.95
0604LX200BULB	Replacement Bulb for LX200 Lamp	5.00

SOLDER PRODUCTS

All solder products resin core, 60/40.

Part No.	Description	Price
060700	Solder Tube, 0.031", 10gm.	$0.75
060701	Solder Roll, 0.031", 100gm.	4.25
060704	Solder Roll, 0.031", 1/2 lb.	8.95
060702	Solder Roll, 0.031", 1 lb.	15.90
060703	Solder Roll, 0.062", 1 lb	15.50

SOLDER – LEAD FREE

- 96.5% Tin; 3.0% silver; 0.5% copper
- .031" Dia., Rosin Core

Part No.	Description	Price
060709	10 gm. Tube	$2.50
060710	1 lb. Spool	69.90

SOLDER – LEAD FREE

- 99% Tin, .3% Silver, .7% Copper
- .031" Dia., Rosin Core

Part No.	Description	Price
060715	10 gm. Tube	$1.75
060717	1/2 lb. Spool	$19.90
060714	1 lb. Spool	36.95

SOLDER PASTE FLUX

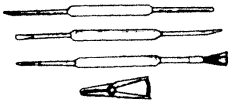
Part No.	Description	Price
060712	Soldering Paste, Acid, SP30, "Kester"	$5.90

SOLDER PASTE FLUX

- Helpful in smooth solder flow
- 50 gm box

Part No.	1-9	10+
0608ZD170	$2.50	$2.25

RSR SOLDER AID KIT



4 pc helper set. Brush, Scraper, Heat-sink, Probe, to clean and ream holes. Includes a plastic pouch with dividers.

Part No.	Description	1-9	10+
060830	Solder Aid Kit	$2.95	$2.75
060332	Heat Sink	0.70	0.65

FLUX PEN

Excellent for rework and touch-up. This allows controlled application of flux eliminating the mess from flux bottles. Spring loaded tip dispenses just the right amount of flux.

060720: is mildy activated (RMA) type flux approved under MIL-F-14256 for military grade.

060722: is a halide free "no-clean" flux that leaves minimal residues.

060723: is a low order water soluable flux. Neutral pH.

Part No	Description	1-9	10+
060720	RMA Flux Pen Formula 186	$6.95	$6.75
060722	"No-Clean" Flux Pen Formula 951	6.95	6.75
060723	Water Soluable, Neutral pH	6.95	6.75

RSR SOLDERING IRON STANDS

Fig. A

Fig. B

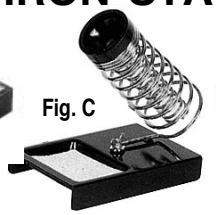


Fig. C

Fig. D

Fig. E

Fig. F

Fig. G

Solder Sold Separately

Part No.	Fig.	Description	Price
060840	A	Economy Model	$0.50
060841	B	Economy w/Sponge	0.70
060842	C	Sheetmetal Stand w/Sponge	3.95
060846	–	Sponge For 060842	0.45
0608ZD10W	D	Stand w/ Brass Cleaning Ball	5.90
060843	E	Heavy Duty Stand w/Sponge	6.50
060844	F	Deluxe Heavy Duty Stand W/Sponge Can be used for Electric Desolder Tool 060848	6.95
0608102	G	Solder-Feeder Stand w/ Sponge	8.95

SOLDER REEL STAND

MODEL RD7312

- Holds up to 2 lb. roll of solder wire.
- Keeps bench neat and draws out solder smoothly.

Part No. 0607RD7312 • Price: $7.90

XYTRONIC TIP CLEANER

- Made of low abrasive brass shavings
- Cleans better than conventional sponges
- Heavy duty stainless steel holder

Part No.	Description	1-9	10+
0603460	Base and Cleaner	$5.75	5.25
0603459	Replacement Cleaner	2.95	2.75

Weller® TIP TINNER

- Regeneration of oxidized tips
- Prolongs lifetime of tips

Part No. 0603WTT • Price: $8.40

MAGNETIC PICK-UP

POCKET TYPE

Powerful magnet. Antenna type: collapses to 6"; 32" long (extended).

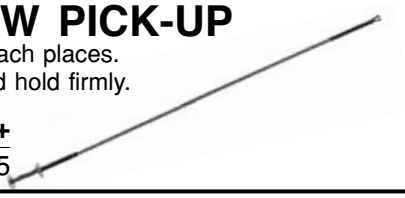
Part No.	1-9	10+
0604MP2	$2.50	$2.25

MAGNETIC PICK-UP

•Powerful magnet. • Cushion grip.

Part No.	1-9	10+
0604MP	$3.50	$2.95

FLEXIBLE CLAW PICK-UP



- Pick up parts in hard to reach places.
- Jaws open wide, close and hold firmly.

Part No.	1-9	10+
0604FCP	$4.95	$4.25

NEEDLE FILE SET

12 PIECE

12 pc. assortment of 5 1/2" files in a plastic pouch. Made to exacting specifications for jewelers, watchmakers and other craftsmen.

Part No.	Description	1-9	10+
0604451P	Economy Set	$5.95	$5.50

Nicholson®

MULTI-PURPOSE 8" FILE

- One side single-cut for tool sharpening and smoothing metal surfaces.
- Reverse side is double-cut for general filing and rapid stock removal.
- One cut edge, one safe edge.
- 8" length *(does not include handle)*

Part No. 060406601 • Price: $11.90

Nicholson® 9 PIECE FILE SET

- Rubber-coated ergonomic handles for better comfort and control
- 12"/300mm mill bastard file
- 10"/ 250mm flat bastard file
- 10"/250mm mill bastard file
- 10"/ 250mm half-round bastard file
- 10"/250mm round bastard file
- 8"/200mm flat bastard file
- 8"/200mm half-round bastard file
- 6"/150mm xx slim taper file
- 6"/150mm slim taper file

Part No. 060422030H • Price: $89.00

SAFETY GOGGLES

Soft vinyl frame. Contours to head. Fits over personal glasses. Ventilated for comfort.

Part No.	1-9	10+
060370	$1.90	$1.70

SAFETY SPECTACLES

Polycarbonate spectacles with optically correct polycarbonate lens. Full Front, side and top protection, high velocity impact resistant. Blocks 99.9 % of harmful UV light. Meets ANSI Z87.1

Part No.	1-9	10+
060372	$2.25	$1.95

SAFETY GOGGLES – DELUXE

Protect against impact, dust, mist and chemical splash. Wrap around design, soft rubber construction. Can be worn over prescription glasses. Indirect venting, clear lens with anti-fog coating. Meets ANSI Z87.1, CE EN166 specs.

Part No.	1-9	10+
060374	$5.50	$4.95

SAFETY SPECTACLE – DELUXE

- Wrap around design provides maximum protection
- Indoor/outdoor clear, UV 400 lens
- Ultimate lightweight with soft nose and earpiece
- Meets ANSI Z87.1 and CE EN166
- Strap, eye-wear optional

Optional Strap

Part No.	Description	1-9	10+
060373	Spectacle	$3.50	$2.95
060379	Strap – Black	0.50	0.40

SOLDER BRUSH

METAL BRISTLE

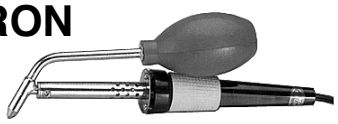
Part No.	1-9	10+
060338	$1.35	$1.30

ACID BRUSHES

6" long handles of heavy grade tin plate. Horsehair bristles extend a full 3/4" from the handle.

Part No.	Dia.	1-9	10+
060336	1/4"	$0.30	$0.25
060337	3/8"	0.30	0.25

DESOLDERING IRON



One hand operation. Vacuum bulb. 40W Iron

Part No.	1-9	10+
060849	$6.25	$5.95

ELECTRIC DESOLDERING TOOL

One hand operation. Disassembles easily for cleaning.

Part No.	Description	Price
060848	Desoldering Tool	$28.50
0608508355	Replacement Tip	6.95

DESOLDERING WICK

Part No.	Description	Price
060800	Economy model 5' spool	$0.95
060801	3S Brand, 5' spool	1.45
060802	3S Brand, 50' spool	10.95

TECHSPRAY™

NO-CLEAN DESOLDERING BRAID

PROVEN BEST FOR LEAD-FREE!

Higher temperatures required for lead-free soldering tend to bake on undesirable flux residues. Using No-Clean Braid prevents this contamination as it is coated with a proprietary flux formula leaving almost no residue.

Part No.	Description	1-9	10+
060818155F	5 Ft. 0.055" (1.4mm)	3.90	3.75
060818165F	5 Ft. 0.075" (1.9mm)	3.90	3.40
060818175F	5 Ft. 0.098" (2.5mm)	4.50	3.95
060818185F	5 Ft. 0.130" (3.3mm)	4.40	3.90

TIP TINNER LEAD FREE

It's use will prevent oxide build up and depletion of tin on the tip. It prolongs tip life and heat transfer. ESD safe, lead free, residue free.

Part No.	Descr.	1-9	10+
0603TTLF	1/2 oz.	$5.75	$5.50
0603TIP2	1 1/2 oz.	8.75	8.25

®M.G. Chemicals

SILVER CONDUCTIVE PEN

- Excellent for repairing and modifying printed circuits and EMI/RFI shielding applications.
- Silver pigment provides excellent corrosion resistance.
- Quick drying, convenient pen applicator for precision work.
- Resistivity 0.2 ohm-mil.

Part No.	Price
03SCP	$26.00

DESOLDER PUMP

Rugged Metal construction. Replaceable non-stick nylon tip. Lightweight and compact.

Part No.	Description	1-9	10+
060820	Pump w/Tip	$2.25	$1.95
060821	Extra Tip	0.85	0.70
060845	Anti Static Pump	3.75	3.25

DESOLDER PUMP

- High vacuum heavy-duty plastic.
- Fully enclosed shaft for safety.
- Plunger lock for storage.

Part No.	Description	1-9	10+
0608RD7382	Pump W/Tip	$5.30	$4.95
060829	Tip For Above	1.20	1.10

DESOLDERING BULB

Part No.	Description	Price
060825	Bulb W/Tip	2.35
060826	Tip For Above	1.10

EDSYN®

SOLDAPULLT®

Superior quality desoldering

Part No.	Description	1-9	10+
060823	Universal US140 Model	$14.25	$13.25
060822	Deluxe DS017 Model	25.00	24.00
0608SRT12	Tip for US140 & DS017	4.95	4.50

EDSYN®

SOLDAPULLT® CHALLENGER

SS750LS

SS350

One-handed operation, thumb control for loading plunger. Both designed for use with static sensitive components. ***SS750LS*** model features conductive plastic barrel, and ***SS350*** has an aluminum barrel. Overall pump length 8.5".

Part No.	Description	1-9	10+
060831	Model SS750LS (Plastic)	$14.70	$13.70
060832	Model SS350 (Aluminum)	23.44	22.44
060837	Replacement Tip for SS750LS	2.95	2.75
060383	Replacement Tip For SS350	4.95	4.50

Ungar® DESOLDER PUMPS

MODEL 7881

- Powerful, heavy-duty, spring loaded vacuum for complete solder removal.
- Cushioned plunger, easy thumb activation and ribbed pencil grip.
- Constructed of static-dissipative material

Part No.	Description	Price
06087881	Pump ESD Safe W/Tip	$34.30
06087883	Tip for 7881	8.70

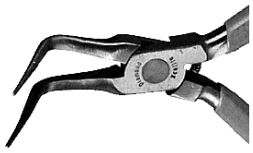
MINI BENT NOSE PLIERS

ECONOMY MODEL

Drop forged steel. Return spring. Cushion grip.

Part No.	Size	1-9	10+
0602BNP1	4 1/2"	$2.50	$2.25
0602BNP2	6 1/2"	2.75	2.50

Xcelite® CURVED LONG NOSE PLIERS



Smooth jaws, green cushion grip

A: Total Length / B: Jaw Length

Part No.	Model	A	B	Curved	Price
0602CN54G	CN54G	5"	15/16"	60	$19.90
0602CN777-6	CN7776	6"	1-3/8"	60	20.80
0602CN55-G	CN55G	5-1/2"	1-9/16"	45	23.60

ROUND NOSE PLIERS

Stainless steel. Insulated grip handle. Spring loaded. 5" long.

Part No.	1-9	10+
0602SA701	$4.75	$4.25

LINESMAN PLIERS

8" long. Drop forged, fully polished. Cushion grip.

Part No.	Length	1-9	10+
0602971	6"	$3.25	$2.95
0602972	8"	3.50	3.25

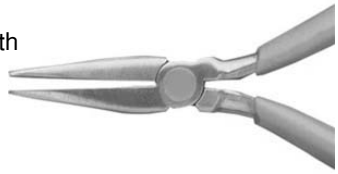
SLIP JOINT PLIERS

Chrome plated. Drop forged steel. Cushion grip. 6" or 8" long.

Part No.	Type	1-9	10+
0602996	6"	$4.75	$4.25
0602998	8"	4.95	4.75

Xcelite® FLAT NOSE PLIERS

MODEL DN54G



5" flat nose pliers. Duck bill, smooth jaws, green cushion grips.

Part No.	Price
0602DN54G	$19.70

MINI LONG NOSE PLIERS

ECONOMY MODEL

Drop forged steel. Serrated jaws. Return spring. Cushion grip.

Part No.	Length	1-9	10+
060210	4 1/2"	$1.95	$1.75
060215	6 1/2"	2.75	2.50

LONG NOSE PLIERS

DELUXE QUALITY

Drop forged steel. Serrated jaws. Side cutter. Cushion grip. Return spring. 5" long.

Part No.	1-9	10+
060211	$3.75	$3.50

MINI NEEDLE NOSE PLIERS

ECONOMY MODEL

Drop forged steel. Return spring. Cushion grip.

Part No.	Length	1-9	10+
0602NNP1	6"	$1.95	$1.75

Xcelite® LONG NOSE PLIERS

MODELS L4, LN4G, LN54, LN54G, SN54, SN55

Quality pliers, cushion grip and return spring

A: Total Length / B: Jaw Length

Part No.	Model	A	B	Description	Price
0602L4	L4	4"	13/16"	Serrated Jaws	$16.10
0602L4G	L4G	4"	13/16"	Smooth Jaws	18.00
0602LN5	LN54	5"	1-3/16"	Serrated Jaws	16.70
0602LN54G	LN54G	5"	1-3/16"	Smooth Jaws	17.90
0602SN54	SN54	5"	1-3/16"	Side Cutting + Serrated Jaws	18.00
0602SN55	SN55	5-1/2"	1-11/16"	Side Cutting + Serrated Jaws	17.50

Xcelite® NEEDLE NOSE PLIERS

Quality pliers, cushion grip, return spring

A: Total Length / B: Jaw Length

Part No.	Model	A	B	Description	Price
0602NN54	NN54	5"	1-3/16"	Serrated Jaws	$20.80
0602NN54G	NN54G	5"	1-3/16"	Smooth Jaws	21.00
0602NN55	NN55	5-1/2"	1-11/16"	Serrated Jaws	20.70
0602NN55G	NN55G	5-1/2"	1-11/16"	Smooth Jaws	20.90
0602NN7776	NN7776	6"	2-5/16"	Long Serrated Jaws	19.90

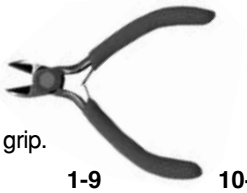
Xcelite® SHEAR CUTTER / PLIER SET

2 PC. – *MODEL S2K*

- All-purpose miniature electronic flush cutter and needle-nose pliers
- Superior overall quality
- Advanced handle design
- Highest quality carbon steel
- Non-glare black finish
- Lighweight construction

Part No. 0602S2K • Price: $16.30

DIAGONAL CUTTER
ECONOMY



Drop forged steel. Return spring. Cushion grip.

Part No.	Length	1-9	10+
060200	4 1/2"	$1.95	$1.50
060201	4 1/2" *(Deluxe Quality)*	2.95	2.50
060204	6 1/2"	2.50	2.20

Xcelite® DIAGONAL CUTTER
MODEL 54CG

Midget size for work at close quarters.

Part No.	Price
060254CG	$18.20

Xcelite® DIAGONAL CUTTER
MODEL S475CJS

Heavy duty 5" diagonal cutter. Flush cutting, used to cut component leads. Features tapered head and puffy grips.

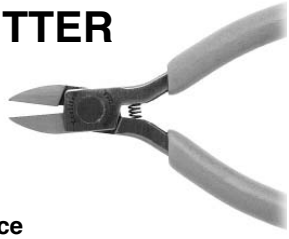
Part No.	Price
0602S475CJS	$17.50

Xcelite® DIAGONAL CUTTER
MODEL S54

- Heavy duty cutting; 4 1/2"
- Green cushion grip

Part No.	Price
0602S54	$18.00

Xcelite® DIAGONAL CUTTER TAPERED HEAD
MODELS MS549J / EMS545J



- Flush cutting in tight spaces
- Tapered head

Part No.	Length	Price
0602MS549J	4"	$18.60
0602EMS545J	5-1/2"	28.50

Xcelite® FLUSH CUTTER
MODEL 170M

Mini shear. Cuts in tight areas. Cuts up to 16 AWG leads. Cushioned grip.

Part No.	Price
0602MS01	$6.00

CABLE CUTTER

- 10" cable cutter
- Forged steel high quality blade

Part No. 0602200-069 • Price: $18.95

ECONOMY 7 IN 1 HAND TOOL

Wire stripper; wire cutter; steel wire cutter; pliers; wire loop; scale mm and inches; crimping tool.

Part No.	Description	1-9	10+
0602HT1041	For 10-18 AWG Wire	$6.75	$6.25
0602HT1042	For 16-26 AWG Wire	5.50	$4.95
0602HT1043	For 22-30 AWG Wire	5.95	5.50

Xcelite®
6 PC. PLIERS KIT

- Compact kit with 6 most popular pliers
- Durable pocket pouch with heavy duty snaps
- EC54J, MS54, SN54, NN54, DN54G, LN54

Part No. 0602C1K • Price: $123.00

FLAT RIBBON CABLE CUTTER

- Useful for cutting ribbon cable
- Cutter, clamper, wire loop and steel wire cutter
- Cuts copper up to 30mm in width

Part No.	1-9	10+
0602HT502C	$7.75	$6.95

Crescent®
CUTTER AND NOSE PLIERS
ProSeries

- Co-molded grips
- Laser hardened edges
- Long cutting edges for harder wires
- Made of drop-forged alloy steel
- Polished head

A B C D

Part No.	Description	Fig.	Price
06026546SCMG	Long Nose, Side Cutting, 6 5/8"	A	$16.70
06029336CMG	Diagonal Cutter, General Purpose, 6"	B	13.50
06029337CMG	Diagonal Cutter, General Purpose, 7"	B	13.95
06025427CMG	Diagonal Cutter, Heavy duty, 7"	C	15.95
06025428CMG	Diagonal Cutter, Heavy Duty, 8"	C	16.60
0602508CMG	Lineman's Pliers, Side Cutting, 8 5/16"	D	20.70

Crescent®

LONG CHAIN NOSE PLIERS

7 1/2" WITH SIDE CUTTERS

- 7 1/2" over-all length. 2 5/8" from bottom of side cutter to nose tip.
- Constructed of high quality forged alloy tool steel and individually tested.
- Electronically induction hardened.
- Hand-honed, keen side cutting edges.
- Polished head, non-slip red handle grips, fine serrated jaws.

Part No.	1-9	10+
06026547	$15.50	$14.40

VERSATILE STRIPPER & CUTTER

SUPERIOR PERFORMANCE

Cuts and strips both stranded and single wire gauges 10 to 22 AWG. Models available for 10-22 AWG, 16-20 AWG and 20-30 AWG. Features include coil return spring, and wire looping, bending holes, a black oxide finish, locking mechanism and ground, hardened and tempered cutting surfaces for precise work. 6 3/4 overall length.

Part No.	Description	1-9	10+
0602JIC1022	10-22 AWG	$9.95	$8.75
0602JIC1626	16-26 AWG	9.95	8.75
0602JIC2030	20-30 AWG	9.95	8.75

MILLER®

STRIPPER AND CUTTER

THUMB ADJUSTABLE

MODEL 111-TAS

- Strips and cuts 22 AWG to 10 AWG.
- Patented mechanism allows for full range adjustment
- Once set, operating pressure creates maximum operator leverage
- Precision formed, hardened, tempered and ground cutting surfaces for clean, smooth strips.

Part No.	Description	
0602111TAS	Thumb Adjustable Cutter	$12.50

CONNECTOR-CRIMPING PLIERS WITH SIDE CUTTERS

Designed to press UG, UR and UY connectors. Also known as PRESSINGC. Special stop prevents damage to connectors. Use with plastic and pulp insulated 19, 22, 24 and 26 AWG copper conductors as well as 20 AWG plastic insulated copper steel wire.

Part No. 0602JIC891 • Price: $16.50

CRIMPING TOOL / WIRE STRIPPER

Also strips and cuts 10 to 22 gauge wire.

Part No.	1-9	10+
0602CBCT	$3.95	$3.00

Xcelite®

HARD WIRE CUTTER

(PIANO AND MUSIC)

- Shear cutting action
- Ensures square cut ends
- Wire capacity .062"
- Stranded cable capacity 1/16 in.

Part No.	Price
0602134CG	$39.10

Xcelite®

SELF-ADJUSTING COMBINATION STRIPPER

MODEL SAS3210

For cutting and stripping a wide variety of jacketed wires and cable including PVC, conduit wire, mains cables, equipment wire and communications cables.

- Strips 32-10 AWG
- Standard blade cassette supplied with straight blades for stripping PVC and other soft insulation materials
- Optional teflon V blades for stripping PTFE and other hard insulation materials

Part No.	Description	Price
0602SAS3210	Combination Wire Stripper	$75.00
0602SAS3210RB	Straight Replacement Blades	22.90
0602SAS3210TRB	Teflon Wire Replacement Blades	32.10

Xcelite®

CABLE JACKET STRIPPER

MODEL CJS100

A precision stripping tool for removing the sheath from signal, telephone, audiovisual, instrumentation and data transmission copper and fiber optics cables.

- Features 10 position indexed blade height adjustment
- **Flexible:** Strips the sheath from most multicore and fiber optics cables up to 0.43" in diameter
- **Tough:** Tested to over 50,000 cycles
- **Strip Range**: 2.5mm – 11mm diameter
- **Length:** 3.6", **Height:** 1.6"
- **Weight:** 0.9 oz.

Part No.	Description	Price
0602CJS100	Cable Jacket Stripper, 0.43" Max. Dia.	$26.10

PRECISION STRIPPER & CUTTER

- Wire stripper; cutter; steel wire cutter; pliers; wire loop
- With grinding blades for sharp cutter and stripper

Part No.	Description	1-9	10+
0602HT5021	For Wire AWG 10 to 22	$6.90	$6.75
0602HT5022	For Wire AWG 14 to 24	6.90	6.75
0602HT5023	For Wire AWG 20 to 30	6.90	6.75

UNIVERSAL STRIPPING TOOL – 4"

Strips outer insulation of flat and round multiconductor cable from 3.5mm – 9mm max. It can even handle irregular out-shape of insulation.

Part No.	Price
0602HT501	$8.75

COAX CABLE STRIPPER

- Strips the coaxial jacket and inner conductor in one operation
- 2 blade model
- Suitable for RG58/59/62/6

D = 4, 6, 8, 12mm

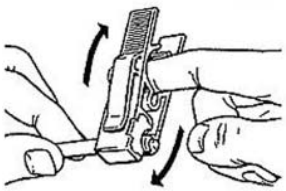
Part No.	Price
0602HT332	$10.50

Xcelite® COAXIAL WIRE STRIPPER

PRE-ADJUSTED FOR RG 59 & RG 6

MODEL 2CSKCATV

- Tool specially designed to quickly and easily strip RG 59 and RG 6 cables for CATV "F" connectors
- Built-in stop (no adjustments needed)
- Replaceable blade cassette lasts 1,000-2,000 strips
- Convenient built-in belt clip
- Full operating instructions listed on back of blister card



Part No.	Price
0602CSKCATV	$9.20

WIRE STRIPPER AUTOMATIC

MODEL 766

- Wire size 12 to 22.
- Equipped with "Trig-O-matic" stay open feature, especially suited for stripping fine and stranded wires.

Part No.	1-9	10+
0602766	$12.95	$12.25

RSR ECONOMY MODEL

Economy adjustable wire stripper. Return spring. Cushion grip. 5" long.

Part No.	1-9	10+
060220	$2.65	$2.60

Xcelite® STRIPPER AND CUTTER

MODELS 100X, 101S, 103S

- Adjustable screw stop for different wire sizes
- Cut and strip solid and stranded wire
- Unique cam stop adjusted for different wire sizes ***(Model 103S only)***

100X, 101S

103S

Part No.	Model	Price
0602XL100X	100X	$10.50
0602101-S	101S	13.40
0602XL103S	103S	12.60

MILLER® STRIPPER AND CUTTER PREMIUM STRIPPER

Adjustable. Tempered steel. Cushion grip. 5" long.

Part No.	Description	Price
0602100	Stripper Without Spring	$7.90
0602ML101S	Stripper W/Spring	9.90

MILLER® STRIPPER AND CUTTER PREMIUM STRIPPER WITH SPRING

Adjustable. Tempered steel. Cushion grip. Return spring. 5¼" long.

Part No.	Price
0602103-S	$10.95

PROFESSIONAL WIRE STRIPPER

Premium form knife type blades. Built-in wire cutter. Cushion grip. AWG 16 to 30.

Part No.	Description	1-9	10+
060245-121	AWG 16-26 stranded	$15.75	$14.50
060245-125	AWG 22-30 solid	19.25	18.25

Xcelite® SHEAR / SNIP

MODEL 86CG

- 1 1/2" / 38mm cut pointed blades prevents peaks on fine wires and filaments
- Removes insulation and cuts light sheet metal
- Safety latch
- 6 1/2" in length

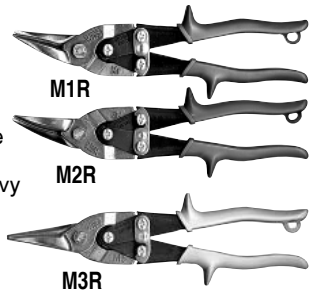
Part No.	Price
060286CG	$29.10

Wiss® SNIPS METALMASTER®

COMPOUND ACTION

MODEL M1R – LEFT, TO STRAIGHT CUTS – RED HANDLE
MODEL M2R – RIGHT, TO STRAIGHT CUTS – GREEN HANDLE
MODEL M3R – LEFT, RIGHT, OR STRAIGHT CUTS – YELLOW HANDLE

- Useful for cutting copper clad circuit boards.
- Recommended for cutting 18 gauge max. capacity low carbon cold rolled steel. 9 3/4" overall length.
- Extra tough non-slip serrated jaws made of wear-resistant molybdenum steel.
- Withstand severe strain of cutting heavy stock and tight curves.
- High strength steel handles, with non-slip color coded textured grips.



Part No.	Description	1-5	6+
0602M1R	Metal Snips Left/Straight, Red	$23.95	$21.95
0602M2R	Metal Snips Right/Straight, Green	23.95	$21.95
0602M3R	Metal Snips Left/Rt/Straight, Yellow	23.95	$21.95

Wiss® SNIPS MULTIMASTER®

- Combines the long cut of tinners snips with the strength of a compound action
- Compound action multiplies the force of the hand by five times
- Great for making fast, long cuts in paper, plastic, sheet metal, aluminum, vinyl siding
- Cuts up to 20 gauge steel

Part No.	1-5	6+
0602M300	$23.50	$21.50

Wiss® ALUMINUM TIN SNIPS

MODEL W12LMP

- Lightweight aluminum snips. Weighs only 1 lb.
- Make straight or curved cuts in light metal, flash, vinyl siding
- 3 1/2" rust-resistant blades will handle materials as tough as 23-gauge, low carbon steel. Total length 12".

Part No. 0602W12LMP • Price: $26.95

Wiss® INDUSTRIAL SHEARS – BENT TRIMMERS

- Made of high carbon steel
- Black handle
- Hot drop forged nickel-plated blades

Part No.	Length	1-5	6+
0602IS426	6 1/4"	$27.95	$26.95
0602IS427	7 1/8"	27.95	$26.95
0602IS428	8 1/8"	28.95	$27.95

SNIP / CUTTER

SHEET METAL, PC BOARD

Metal Snip Right/Straight, Green

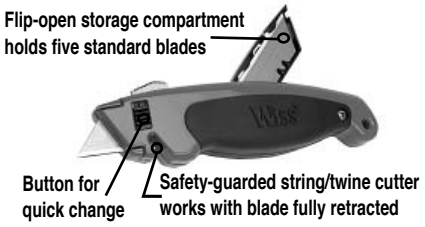
- Useful for cutting copper clad board
- 9-3/4" overall length, serrated jaws
- Can use to cut 18 gauge steel

Part No. 0602RLSP02 • Price: $5.95

Wiss® QUICK CHANGE KNIFE

Features:

- Deluxe retractable utility knife
- Quick no tools blade replacement
- Molded-on rubber grip
- Safety-guarded string/twine cutter
- Nine blade positions
- Die cast metal construction with powder-coated finish
- Flip open storage for 5 blades; four included


Flip-open storage compartment holds five standard blades
Button for quick change
Safety-guarded string/twine cutter works with blade fully retracted

Part No. 0604WK500V • Price: $14.95

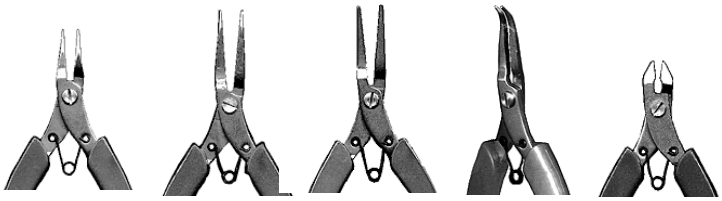
VESSEL® HAND RATCHET RIVET GUN

MODEL RG-95

- Easy ratchet fastening
- Well balanced and light weight aluminum cast housing
- 4 rivet noses and one spanner, includes 2.4mm, 3.2mm, 4mm and 4.8mm
- Auto slide safely covers rivet until fastening completed

Part No. 0602RG95 • Price: $89.95

PRECISION 5 PIECE STAINLESS STEEL TOOL SET



Round Nose Pliers *Long Nose Pliers* *Flat Nose Pliers* *Bent Nose Pliers* *Diagonal Cutters*

- Cushioned grips
- Return spring

Part No.	Description	1-9	10+
0602MP204	4.5" Round Nose Pliers	$5.50	$4.95
0602MP201	4" Long Nose Pliers	5.50	4.95
0602MP202	4" Flat Nose Pliers	5.50	4.95
0602MP203	4" Bent Nose Pliers	5.50	4.95
0602MP200	4" Diagonal Cutters	5.50	4.95
0602MPSET	5 Piece Set	16.95	15.95

Wiss® HEAVY DUTY INDUSTRIAL SHEARS

***MODEL 22* – 12 1/4" OVERALL LENGTH**
***MODEL 29* – 9 1/4" OVERALL LENGTH**

- Finest quality cutlery steel.
- Hot drop-forged polished blades
- Black handles.

Part No.	Description	Price
0602WISS22	12" Industrial Shears	$49.90
0602WISS29	9" Industrial Shears	44.00

Wiss® INLAID INDUSTRIAL SHEARS

MODEL 1DS 8 1/2"

- Made from carbon steel.
- Nickel-plated blades and handle.
- Hot drop-forged commercial finish.
- Enlarged lower ring for comfort.
- 8 1/2" overall length.

Part No. 06021DS · Price $30.95

Wiss® 7" STRAIGHT METAL CUTTING SNIPS

- Cuts straight and wide curves up to 23 gauge.
- Blades individually hand edged.
- Flat face guides tool in straight line.
- Hot drop-forged, rust resistant blades made of finest quality steel.
- Cushion non-slip grips.
- Applications: plumbing, heating, air conditioning, roofing.

Part No. 0602A13 · Price: $20.95

Wiss® QUICK-CLIP LIGHTWEIGHT SPEED CUTTERS

- Stainless steel replaceable blades.
- Positive spring-action maintains blades in open position.
- PVC plastic handles.

Part No. 06021570B · Price: $8.50

SCISSORS - CERAMIC

Ideal for cutting Kevlar, fiberglass mat and fiber optical cables. These scissors are very light, sharp and water resistant. Approx. 2" cutting edges

Part No. 0602CERSC · Price $27.95

Crescent® END CUTTING NIPPERS

- Top quality 7 1/4" end cutting tool.
- Precision manufactured from heat treated forged alloy tool steel.
- Hardened angled cutting edges cut clean and remain sharp.
- High grip to balde leverage ratio.
- Non-slip cushion grips.

Part No. 0602727CV · Price: $20.50

H.K. Porter® HIGH-LEVERAGE CABLE CUTTER

9 1/2"

- Special alloy hardened, shear-cut blades, high-leverage jaws.
- Compact, fits most tool pouches.
- Non-slip grips.
- **NOT** designed to cut steel or ACSR cable. **NOT** an insulated tool.
- Capacity: 4/0 aluminum, 2/0 soft copper cable.

Part No. 0602CC · Price: $19.50

Wiss® HAND SEAMER

- Bends and flattens metal for forming permanent, tight fitting seams in sheet metal.
- Cast and machined seamer head.
- Rust resistant, finest quality steel.
- Cushion all-weather handles.
- Jaw width: 3 1/4". Max seam depth 1 1/4". Incremental depth marks on jaw 1/4" apart.

Part No. 0602HS1V · Price: $46.95

7" QUICK RELEASE VISE WRENCH

- Drop Forged
- Chrome Molybdenum Steel Jaw
- Quick Release Lever
- Lifetime Warranty

Part No. 06047527 · Price: $4.50

TWEEZERS

- Stainless steel.
- Fine serrated points.

Part No.	Description	1-9	10+
06041040	7" Straight	$1.75	$1.45
06041041	7" Curved	1.75	1.45
06041042	4 1/2" Straight	1.65	1.35
06041043	4 1/2" Curved	1.65	1.35
06047SA	4 1/2" Curved; Fine Quality	2.25	1.95
0604SSSA	5" Straight; Fine Quality	2.25	1.95

CLAMPS

- Stainless steel.
- Serrated jaws provide a vise-like grip when clamp is locked.

Part No.	Description	1-9	10+
0604352	7" Curved	$3.25	$2.75
0604353	7" Straight	3.25	2.75
0604355	5" Curved	2.25	1.75
0604356	5" Straight	2.25	1.75

TAPERED REAMER

- 1/8" to 1/2"
- Enlarges and counter-sinks holes

Part No.	1-9	10+
0604720	$4.50	$4.25

UTILITY KNIFE

MICRO-WITH RETRACTABLE BLADE

- Easy to carry.
- Small, highest quality knife.

Part No.	1-9	10+
06045511	$3.75	$3.10

UTILITY KNIFE

WITH RETRACTABLE BLADE

A 4 position blade with smooth slide action mechanism.

Part No.	1-9	10+
0604331	$3.50	$2.95

KNIFE SET

13 PC.

Two quality knives in a deluxe case plus 8 assorted blades.

Part No.	1-9	10+
03RD73893	$10.95	$9.95

DELUXE KNIFE SET

26 PC.

Four quality knives in a deluxe case with 17 assorted blades.

Part No.	1-9	10+
03RD73894	$28.95	$27.95

STANLEY SCREWDRIVER SETS

6pc. /10pc. /20pc.

- Ergonomically designed handle with textured grip for greater comfort
- Nickel-plated bar resists corrosion

Part No.	Description	Price
060160-060	6 pc. set	$5.95
060160-100	10 pc. set	$8.95
060160-220	20 pc. set	$17.95

velleman

POWER MINI SCREWDRIVER

WITH LED LIGHT

- Rechargable 4.8V with 6 accessories
- Forward / reverse operation
- Flat 4mm, 6mm; Phillip #1, #2;
  Drill 3mm; charger

Part No. 0601VRTCSU • Price: $17.95

TWEEZER WITH MAGNIFIER

- Stainless steel 3 3/4" tweezer
- 1" diameter glass lens, power 4X

Part No.	1-9	10+
0604MC46	$2.95	$2.50

STANLEY UTILITY KNIFE

Part No.	Description	Price
060210-299	5 1/2"; Fixed blade	$3.15
060210-179	5 5/8"; High visibility, retractable	$5.00
060210-099	6"; Three position, retractable	$4.70
060210-499	6"; Three pos., quick change, retractable	$6.15
060210-788	6 1/2"; Instant change, retractable	$10.50
060210-778	FatMax, with blade wider	$9.55
060211-921A	100-Pack heavy duty utility blades	$17.20

PRECISION KNIFE

Ideal for draftsmen, model builders artists. Surgical sharp blade. #1 handle 5" long with #11 blade it accepts all popular knife blades.

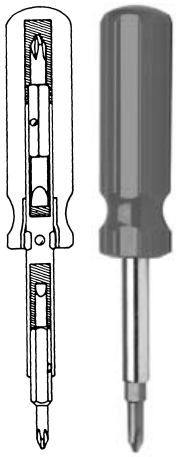
Part No.	1-11	12+
0604X3690	$2.75	$2.50

Xcelite® AND Crescent® SCREWDRIVERS

Part No.	Description	Shaft Length	Total Length	1-9	10+
0601R181	Slotted, 1/8" with Clip	2"	4 1/2"	$1.90	$1.60
0601R184	Slotted, 1/8"	4"	6 5/8"	3.60	3.40
0601243-4	Slotted, 3/16"	3"	7 5/8"	2.95	2.25
06012243-4	Slotted, 3/16" Cushion Grip	3"	6 3/4"	4.95	4.50
060121424	Slotted, 1/4" Cushion Grip	4"	8 3/8"	4.75	4.50
060122436	Slotted, 3/16", Cushion Grip	6"	9 3/4	4.95	4.75
060121426	Slotted, 1/4", Cushion Grip	6"	10 3/8"	4.95	4.75
060143-8	Slotted, 3/8"	8"	12 1/2"	9.50	9.25
0601P12S	Phillip #0	2"	4 1/4"	3.60	3.10
06012501	Phillip #1 Cushion Grip	3"	6 3/4"	3.60	3.10

4 IN 1 QUICK CHANGE SCREWDRIVERS

NO. SDR1 – OUR MOST POPULAR QUICK CHANGE SCREWDRIVER



With #1 Phillip and 3/16" slotted, #2 Phillip and 5/16" slotted.

- Two double end bits, one bit held in each end of the tube.
- Bits reverse in tube, tube reverses in handle, creating 4 screwdrivers in one handle.
- Alloy steel bits.
- Made in the U.S.A.

Part No.	1-9	10+
0601SDR1	$5.95	$4.95

6 PIECE PRECISION SCREWDRIVER SET

Swivel heads, chrome plated handles. Packed in a storage case. Sizes: #00 Phillip, #0 Phillip, 1.4mm, 2mm, 2.4mm, 3.0mm.

Part No.	1-9	10+
060199	$1.95	$1.75

STANLEY

6PC PRECISION SCREWDRIVER SET

- Swivel-head handles
- Soft cushion grip
- Plastic storage space
- Standard: 1.4, 2, 2.4, 3mm
- Phillips: #0, #1

Part No.	1-9	10+
060166-052	$4.25	$3.95

ECONOMY SCREWDRIVERS

PHILLIPS

SLOTTED

General purpose screwdrivers. Magnetic tip. High quality cellulose acetate handles.

Part No.	Type	1-9	10+
060110	Slotted 3/16" x 3"	$0.95	$0.90
060111	Phillip #1 x 3"	0.95	0.90
060114	Slotted 1/4" x 4"	1.25	1.10
060115	Phillip #2 x 4"	1.25	1.10
060124	Slotted Pocket 1/8"	0.60	0.55
060112	Slotted Pocket 1/8" with clip	0.69	0.65
060116	Phillip #0 x 3"	0.75	0.70
060123	Phillip #0 x 2" with clip	0.90	0.80

2-IN-1 SCREWDRIVER

WITH MAGNETIC BUTTON

Reversible shaft. #0 Phillip on one end and 1/8" slotted on other end Powerful magnetic button located on top of grip. Overall Length 4 1/2".

Part No.	1-9	10+
060120	$1.25	$1.15

6-IN-1 SCREWDRIVER

ECONOMY MODEL

- Slotted: 3/16", 1/4"
- Phillip: #1, #2
- Nut Driver: 1/4", 5/16"

Part No.	1-9	10+
0601NDR6	$2.95	$2.50

8-IN-1 SCREWDRIVER

W/LIGHT AND MAGNETIC PICKUP

- Phillip: #1, #2
- Slotted: 3/16", 1/4"
- Torx®: T15, T20
- All tips stored in the handle
- Uses 2 AA batteries *(not included)*

Part No.	1-9	10+
0601DR8	$7.50	$6.50

SCREWDRIVER SET

23 PCS.

Part No.	1-9	10+
0601RDF9001	$6.95	$6.25

Xcelite®

HEX SOCKET SCREWDRIVER SET WITH TORQUE HANDLE

MODEL PS89

Contains 8 pieces (Allen Type). sizes: .028", .05", 1/16", 5/64", 3/32", 7/64", 1/8".

Part No. 0601PS89 • Price: $28.90

MODEL PS90MM (METRIC)

Contains 8 pieces. Sizes: .89mm, 1.27mm, .5mm, 2mm, 2.5mm, 3mm, 4mm, 5mm.

Part No. 0601PS90MM • Price: $32.70

Crescent®

NUT DRIVER SET

5 PIECE – ECONOMY

- Shafts are precision machined, hardened plated for protection and drilled.
- 1 each of 3/16", 1/4", 5/16", 3/8", 7/16"

Part No.	1-9	10+
0601ND1005	$14.75	$13.75

Crescent®

TORX® SCREWDRIVER SET

4 IN 1 – SDDX4

4 piece set containing TX10, TX15, TX20, TX25

Part No.	1-9	10+
0601SDDX4	$9.95	$8.95

Crescent®

SCREWDRIVER SET

4-IN-1

- Phillips: #1x4"; #2x4"
- Sloted 1/4"x4 ; 3/16"x3"

Part No. 0601CSD4PC • Price: $14.95

Crescent®

INTERCHANGEABLE BIT SCREWDRIVER

SDMB7V – 7 IN 1

#1 Phillips x 3/16" Slotted
#2 Phillips x 9/32" Slotted
1/4" x 5/16" Nut Driver, 7/16" Nut Driver

Part No.	1-9	10+
0601SDMB7V	$7.95	$7.50

SCREWDRIVER SET

42 PIECES

- 1 pc Flexible Shaft
- 1 pc High Torque Screwdriver Bit Holder
- 8 pcs Cr-V Screwdriver, Size:
  - — Slotted 5*75mm,6*100mm, 8*150mm, 6*38mm
  - — Phillips #1*75mm, #2*100mm,#3*150mm, #2*38mm
- 7pcs Cr-V Precision Screwdriver
- 25pcs 1" Cr-V Screwdriver Bits with Holder, Size:
  - — Slotted: 3, 4, 5, 6, 7mm
  - — Phillips: #0, #1, #2, #3
  - — Pozi: #0, #1, #2, #3
  - — Torx: T10, T15, T20, T25, T30, T40
  - — Hex: 2, 3, 4, 5, 5.5, 6mm

Part No.	1-9	10+
0601RLS042	$13.95	$12.95

Crescent®

SCREWDRIVERS

***MODEL CMB4V* – 4 IN 1**
***MODEL CMB6V* – 6 IN 1**

Part No.	Description	Price
0601CMB4V	4 in 1 Screwdriver	$6.50
0601CMB6V	6 in 1 Screwdriver	6.95

Crescent®

SCREWDRIVERS – SERIES 2000

- Wide tip easily turns damaged heads.
- Tapered, torque-enhancing cushion grip interlocks with durable core to provide a more powerful and comfortable grip.

Part No.	Descr.	Shaft Length	Total Length	1-9	10+
060122433	Slotted 3/16	3"	6 3/4"	$4.95	$4.50
060121434	Slotted 1/4"	4"	8 3/8"	4.95	4.70
060121436	Slotted 5/16"	6"	8"	6.95	6.75
060121438	Slotted 3/8"	8"	13 1/2"	8.95	8.75
0601214310	Slotted 3/8"	10"	15 1/2"	10.90	10.50
06012501	Phillip #1	3"	6 3/4"	3.60	3.10
06012502	Phillip #2	4"	8 3/8"	3.95	3.50
06012503	Phillip #3	6"	11"	6.95	6.75
06012504	Phillip #4	8"	13 1/2"	8.95	8.50

Crescent®

SCREWDRIVERS STANDARD

- Round shaft
- Ergonomic, high efficiency, high torque handle
- Tool steel shafts for strength and durability
- Cushioned rubber cover for comfort and slippage control

Part No.	Descr.	Shaft Length	Total Length	Price
0601SDD33	Slotted 3/16"	3"	7 1/8"	$2.50
0601SDF310	Slotted 3/16"	10"	14"	4.25
0601SDD41	Slotted 1/4"	1 1/4"	3 1/2"	2.35
0601SDD44	Slotted, 1/4"	4"	8 3/4"	2.75
0601SDD46	Slotted, 1/4"	6"	10 3/4"	3.95
0601SDD56	Slotted, 5/16"	6"	11"	4.95
0601SDDP34	Phillip, #1	4"	7 3/4"	2.75
0601SDDP44	Phillip, #2	4"	8 3/4"	3.20

Xcelite® SCREWDRIVER SET

Color coded handles. Inch sizes: 3/32", 1/8", 5/32", 3/16", 1/4", #0 Phillip, #1, #2 and Torque amplifier handle.

Part No.	Price
0601PS88	$30.90

Xcelite® SCREWDRIVER AND NUT DRIVER SET

MODEL PS130

Color coded handles. 11 pc. set includes Torque amplifier handle and 5 popular sizes ea. of screwdrivers and nut drivers.

Part No.	Price
0601PS130	$42.10

Xcelite® SCREWDRIVER – NUT DRIVER KIT

- Designed for use with cordless, rechargeable screwdrivers
- Most popular sizes, including power adaptor
- 12 piece set in a handy vinyl pouch

Part No. 060199PA50 • Price: $32.80

Xcelite® BLADES AND HANDLES

SERIES '99'

Part No.	Fig.	Description	Prices
060199-1	A	Reg. handle-4 1/8"	$5.90
060199-2	A	Jr. handle-3 1/8"	4.10
060199-3	B	Stubby Handle	4.18
060199-4	C	Tee-handle	6.10
060199-6	D	3/16" nutdriver	4.40
060199-7	D	7/32" nutdriver	4.40
060199-8	D	1/4" nutdriver	4.40
060199-10	D	5/16" nutdriver	4.40
060199-11	D	11/32" nutdriver	4.60
060199-12	D	3/8" nutdriver	4.60
060199-14	D	7/16" nutdriver	5.90
060199-16	D	1/2" nutdriver	5.90
060199-811	E	3/16" slotted	4.10
060199-250	E	1/4" slotted	4.10
060199-821	F	#1 Phillip	4.10
060199-822	F	#2 Phillip	4.10

Fig. A Fig. B

Fig. C

Fig. D Fig. E Fig. F

POWER BIT ADAPTER

FOR XCELITE® 99 SERIES

Designed to adapt any Xcelite 99 series tool to a standard electric drill for power use

Part No. 060199PA • Price: $6.00

PREMIUM NUT DRIVERS

- Full hollow shaft
- Chrome plated
- Color coded handles
- Forged and heat treated sockets
- Made in the U.S.A.

Part No.	Size	1-9	10+
060164	3/16"	$3.95	$3.50
060163	5/16"	3.95	3.50
060161	3/8"	3.95	3.50
060166	1/2"	3.95	3.50

3 PIECE ECONOMY NUT DRIVER SET

- Chrome plated
- Color coded handles.
  - 3/16" black
  - 1/4" red
  - 5/16" yellow

Part No.	1-9	10+
060160	$2.50	$2.25

NUT DRIVER SET

7 PC.

- Hardened steel sockets
- Chrome plated
- Color plastic handles.

Part No.	Description	1-9	10+
0601NDS7	7 Pc. Set S.A.E. Sizes 3/16" to 1/2"	$13.90	$12.90

Xcelite® NUT DRIVER SET

- Model: PS-120 and PS121;
  - Color coded handles
  - Torque amplifier handle
  - 10 different sizes
- Model: PS120
  - Inch sizes from 3/32" to 3/8"
- Model: PS121
  - Metric sizes from 3mm to 10mm.

Part No.	Price
0601PS120	$42.60
0601PS121	52.00

RSR

ELECTRONIC SCREWDRIVER

6 PIECE SET

- Chrome plated blades
- Precision ground tip with sand-blast treatment
- **Slotted:** 1.4x20mm; 1.8x20mm; 2.4x20mm
- **Philip:** #00x20mm; #0x20mm; #1x20mm

Part No.	1-9	10+
06018PK2061	$4.50	$3.95

SCREWDRIVER SET

15 PIECE

- Chrome vanadium steel blade
- **Lengths:** 4 pcs. – 6 1/2"; 11 pcs. – 4 3/4"
- **Torx:** #T6, #T7, #T8, #T9, #T10, #T15, #T20
- **Flat:** 0.08", 0.10", 0.12", 0.16"
- **Phillips:** #000, #00, #0, #1

Part No. 0601VTSET15 • Price: $14.95

velleman

SECURITY BIT SET 33 PIECES

Contents:

- 'Star': #T8, T10, T15, T20, T25, T27, T30, T35, T40
- Hex: #5/64", 3/32", 7/64", 1/8", 9/64", 5/32"
- Hex: #2, 2.5, 3, 4, 5, 6
- Tri-wing: #1, 2, 3, 4
- Fork: #4, 6, 8, 10
- Four-wing: #6, 8, 10
- Magnetic bit holder: 1/4" hex

Part No. 0601VTBT5 • Price: $6.95

RSR

OFFSET RATCHET AND SOCKET DRIVER SET

17 PIECES

This screw and socket driver set comprises six hexagon sockets made from good quality carbon steel. The screwdriver has a 1/4" hexagon drive to accommodate ten 1/4" bits.

Part No.	1-9	10+
06011PK202B	$10.95	$10.50

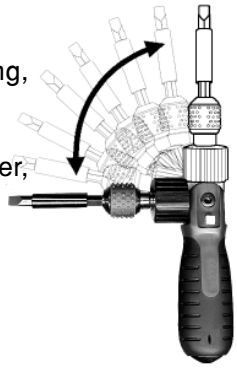
STANLEY

6PC PRECISION SCREWDRIVER SET

- Swivel-head handles
- Soft cushion grip
- Plastic storage space
- Sandard: 1.4, 2, 2.4, 3mm
- Phillips: #0, #1

Part No.	1-9	10+
060166-052	$4.25	$3.95

43-IN-1 REVERSIBLE RATCHET SCREWDRIVER SET



- Handle pivots180 ; multi-positioning, anti-slip grip
- High torque: 220kgf-cm
- Magnetic bit holder, socket extender, socket adaptor, high impact case
- Bits and drivers marked with sizes
- Bit Pack:
  - ⊕ #1, #2, #3
  - ⊖ 1/8", 5/32", 3/16", 1/4", 9/32"
  - ⊕ PZ1, PZ2, PZ3
  - ⬢ H5/64", H3/32", H1/8", H5/32", H3/16", H7/32", H1/4" (Inch Size)
- 9 Piece Nut Drivers: 3/16", 1/4", 9/32", 5/16", 11/32", 3/8", 7/16", 15/32", 1/2"
- Quick, snap-in/release mechanism

Part No.	1-9	10+
06013018A	$21.95	$20.95

Xcelite® SCREWDRIVER AND NUT DRIVER SET

MODEL PS130

Color coded handles. 11 pc. set includes Torque amplifier handle and 5 popular sizes ea. of screwdrivers and nut drivers.

Part No.	Price
0601PS130	$42.10

Xcelite® MINI-DRIVER KIT M60

Contains black torque amplifier handle (M06). 7 piece kit (including handle). Color-coded handles. One 00 Phillips and 5 different mini blade sizes. Tool length (without amp) 2 1/8".

Part No. 0601M60 • Price: $15.00

Xcelite® PRECISION ELECTRONIC SCREWDRIVER SETS

MODEL XP600 – 6 PIECE SET
MODEL XPE700 – 7 PIECE SET

XPE700

- Chrome-malybdenum vanadium steel blades provides superior strength
- Fast turning swivel caps w/cavity provides optimum control for precise centering
- Black oxide tips for longer wear life
- No roll handle design keeps drivers from rolling off uneven surfaces
- ESD safe

XP600
(4) Slotted: 1.5mm, 2.0mm, 2.5mm, 3.0mm
(2) Phillips: #00, #0

XPE700 (Ergonomic Handle)
(5) Slotted: 1/8", 5/32", 3/16", 1/4", 5/16"
(2) Phillips: #1, #2

Part No	Description	Price
0601XP600	XP600 – 6 Piece Set	$25.70
0601XPE700	XPE700 - 7 Piece Set Ergonomic Handle	43.90

Xcelite® SERIES 99® BALLPOINT ALLEN® HEX SOCKET-TYPE SCREWDRIVER SET

INTERCHANGEABLE BLADE SETS

INCH SIZES

MODEL 99PS40BPV

- Ballpoint tip ideal for tightening and removing Allen® socket screws
- Contains 9 blades 4"/101.60 mm long, 99x5 extension and regular 991 handle
- **Blade Sizes:** .050, 1/16, 5/64, 3/32, 7/64, 1/8, 9/64, 5/32, 3/16
- Flexible plastic see-through stand-up case included
- Will engage screw head from any angle
- Precision-machined ends slip easily into sockets and hold securely without reaming.

Part No. 060199PS40BPV • Price: $73.00

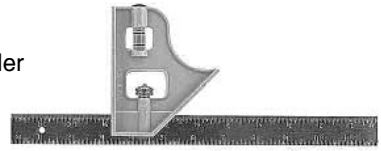
Xcelite® NUT DRIVER SET

7 PIECE

- Hallow shaft
- Blade Length 3 1/8", total length 7 1/4"
- Blade Diameter: 1/4", 9/32", 5/16", 11/32", 3/8", 7/16", 1/2"
- Packaged in blow molded case

Part No. 0601147TB • Price: $49.50

COMBINATION SQUARE – 12"



- Extra strong die cast body
- Stainless steel engraved ruler
- With scriber and level
- English markings

Part No. 060461 • Price: $7.95

DEWALT

SCREWDRIVER – CORDLESS

MODEL DW920K-2 – 7.2V AND DW979K-2 – 12V

DW920K-2
1/4"; 7.2V; 2 position cordless screwdriver kit; 0-500 rpm; torque 80 in-lbs; 1 hour charge, 2 batteries. Wt. 2.5 lbs.

DW920K-2

DW979K-2

DW979K-2
1/4"; 12V; 0-800/2,300 rpm; torque 180 in-lbs.; 1 hour charge; 2 batteries; wt. 4.2 lbs.

Part No.	Description	Price
29DW920K-2	7.2V Screwdriver Cordless	$89.50
29DW979K-2	12V Screwdriver Cordless	225.00

BLACK&DECKER

RECHARGABLE DRILL AND SCREWDRIVER

MODEL PD600

- 6V, dual speed range for drilling holes in high speed and driving screws in low speed
- Integrated light illuminates work surfaces
- Handle locks in 3 positions for tight areas

Part No. 29BDPD600 • Price: $34.95

DEWALT

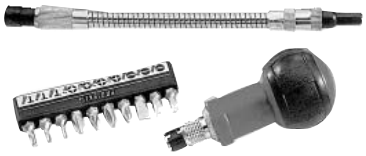
SCREWDRIVER SET

21 piece set contains:

- **1" Phillips Bit Tips**: (1) #1; (6) #2; (1) #3
- **1" Slotted Bit Tips:** (1) #6; (1) #8; (1) #10
- **1" Square Bit Tips:** (1) #1; (3) #2; (1) #3
- **2" Phillips Power Bit:** (1)
- **2" Square Recess Bit:** (1) #2
- **Nutdrivers**: (1) 1/4"; (1) 5/16"
- **2" Magnetic Bit Tip Holder** (1)

Part No. 29DW2161 • Price: $16.75

RSR FLEXIBLE RATCHET DRIVER SET



Flexible (7 1/2") shaft gets into hard to reach areas. Also includes mini ratchet handle and 10 bits.

Part No.	1-9	10+
06011PK201	$7.95	$7.50

METAL INDEX DRILL BIT SET

- High Speed Steel
- Long Lasting Titanium Nitride Coated
- Penetrate 75% Faster
- 135 Degree Split Point Design
- Multi-Purpose: Use for every possible drilling task

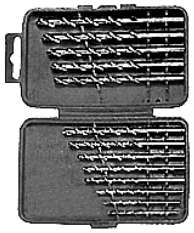
CONTENTS:

— 60 Pcs Wire Gauge Bits – Numbered 1 thru 60
— 26 Pcs Lettered Bits – A thru Z
— 29 Pcs Fractional Bits – - 1/16" - 1/2" in 1/64" Increments
— 1 Pc Plastic Case.
— Weight: 7 Lbs

Part No.	Description	Price
29DS3	115 Piece Drill Set – Wire Gauge Number Size #1 to #60	$59.00

13-PIECE DRILL SET

1/16" THROUGH 1/4"



13 high-speed steel drills. Sizes 1/16" through 1/4" by 64ths.

Part No. 29DS1 • Price: $16.25

DRILL BITS – HIGH SPEED

Ideal for PC board

Part No.	Drill No.	Hole Size (in.)	Length	1-9	10+
29DBIT1	52	0.0635"	1 7/8"	$1.35	$1.25
29DBIT2	53	0.0595"	1 7/8"	1.35	1.25
29DBIT3	54	0.055"	1 7/8"	1.35	1.25
29DBIT4	55	0.052"	1 7/8"	1.35	1.25
29DBIT5	56	0.0465"	1 3/4"	1.35	1.25
29DBIT6	58	0.042"	1 5/8"	1.35	1.25
29DBIT7	60	0.040"	1 5/8"	1.35	1.25
29DBIT8	62	0.038"	1 1/2"	1.45	1.35
29DBIT9	66	0.033"	1 3/8"	1.45	1.35
29DBIT10	68	0.031"	1 3/8"	1.65	1.55
29DBIT11	69	0.029"	1 3/8"	1.65	1.55
29DBIT12	70	0.028"	1 1/4"	1.80	1.70
29DBIT13	72	0.025"	1 1/8"	1.90	1.80
29DBIT14	74	0.022"	1"	1.90	1.80

BLACK&DECKER RECHARGABLE DRILL AND SCREWDRIVER

MODEL PD600

- 6V, dual speed range for drilling holes in high speed and driving screws in low speed
- Integrated light illuminates work surfaces
- Handle locks in 3 positions for tight areas

Part No. 29BDPD600 • Price: $34.95

DEWALT CORDLESS DRILL / DRIVER

MODEL 742KA
MODEL DC730KA
MODEL DW965K-2

DC742KA

DC742KA
12V; 3/8"; 0-400 rpm; chuck: plastic, single speed ratcheting;
1 hour charge; 2 batteries; includes screwdriver bit; wt. 3.8 lbs.

DW965K-2 (Right Angle Drill/Driver)
12V; 0–400/1200 rpm; 3/8"; chuck: plastic, 2-sleeve; wt. 4.1 lbs.

DC965K-2

DC730KA
14.4V; 1/2"; 0–400/1,450 rpm; chuck: plastic, single speed ratcheting; 1 hour charge; 2 batteries; includes screwdriver bit;
wt. 4.3 lbs.

Part No.	Description	Price
29DC742KA	12V Drill/Driver	$159.00
29DW965K-2	12V Rt. Angle Drill/Driver	179.00
29DC730KA	14.4V Drill/Driver	205.00

DEWALT DRILL BIT SET / BLACK OXIDE

17 piece split point set with Tough Case™.

Contains: (2) 1/16"; 5/64"; 3/32"; 7/64"; 1/8"; 9/64"; 5/32"; 11/64"; 3/16"; 13/64"; 7/32"; 15/64"; 1/4"; 5/16"; 3/8"; 1/2"

Part No. 29DW1167 • Price: $24.95

DREMEL ROTARY TOOLS / KITS

These tools offer precision and control required to complete a wide range of projects – from fine art to home repair. All models come with a five year warranty.

Model 100-N/10
Single full speed (35,000 rpm) ideal for routing, cutting, drilling and sanding applications. Includes 10 accessories.

100-N10

Model 200-N/40
Two speed control allows speed of 15,000 or 35,000 rpm with a switch. Includes storage case and 40 accessories.

Model 300-1/24
Variable-Speed Tool Kit. Circle Cutter/Straight Edge Guide. Includes Storage Case and 24 Accessories

300-1/25

Model 400-6/90
Features planer attachment, MultiSaw, FlexLite, Flex Shaft, cutting guide and circle cutter. Includes storage case plus 90 accessories in their own storage area.

Part No.	Description	Price
29DR100-N/10	Single Speed with 10 Accessories	$44.95
29DR200-N/40	Two Speed with 40 Accessories	68.95
29DR300-1/24	Variable speed with 24 Accessories	86.60
29DR400-6/90	Variable speed with 90 Accessories	165.00

DREMEL

CORDLESS MultiPro KIT

7.2V

MODEL 7700-02

Two speed cordless tool and 50 included accessories and storage bag are perfect for a wide variety of do-it-yourself jobs.

- Two speeds 10,000 and 20,000 rpm
- Knurled collet nut for fast accessory change
- 3 hour charger with LED light shows proper charging
- Two year warranty

Part No. 29DR7700-02 • Price: $57.90

MULTI-PURPOSE VARIABLE SPEED ROTARY TOOL SET

Compact design. Includes hard plastic storage/carry case. Variable speed fly switch from 5,000 to 37,000 RPM. ideal for hobby or household projects such as engraving, cutting, grinding, polishing, deburring, sharpening, carving, drilling and shaping. Use with wood, metal, plastics, stone and other materials.

- Hard plastic storage and carry case
- Dual ball bearing design
- Variable speed to 37,000 RPM
- Free accessory kit
- Additional optional accessories available

Part No.	Description	1-4	5+
29DR101	Variable Speed Rotary Tool	$35.95	$33.95
29370C	Diamond Point Set (20 Pcs.)	5.95	5.40
296180C	Mini Drill Set (20) Good for PC Boards	5.50	4.95
29368C	Mini Burr Set (8 Pcs.)	7.95	7.25
16555C	Felt Bob Set (5 Pcs.)	9.95	8.95

DREMEL ELECTRIC ENGRAVER

MODEL 290

- Writes like a pencil
- Permanently marks plastic, steel, glass, etc.
- Calibrated stroke adjustment regulates depth of engraving from fine lines to deep marks
- Operates at 115VAC, 1.6 amp motor, 60 Hz, AC only
- UL listed; 1 year warranty

Part No.	Description	Price
29DR290	Engraver	$26.95
29DRCRP	Carbide Replacement Point (*For Normal Applications)*	9.95

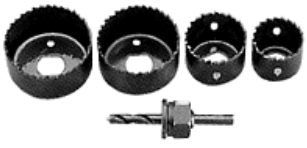
PORTER ✦ CABLE BELT SANDER

MODEL 352VS

3" x 21" variable-speed dial
850–1,300 SFPM; 8 amp motor;
dust bag swivels 360 . Wt. 13 lbs.

Part No. 29PC352VS • Price: $206.00

5-PIECE HOLE-SAW KIT



- Includes the most popular sizes for common pipe entrances and door locks.
- Hardened and tempered alloy steel saws for drilling wood, composition, and plastic up to 3/4" deep.
- Contains 1 1/4", 1 1/2", 2", 2 1/8" hole saws and 1/4" round shank mandrel

Part No. 29HSK5 • Price: $16.95

ADJUSTABLE WRENCHES

Fully drop forged. Hardened and heat treated. Ground and polished.

Part No.	Type	1-9	10+
0601828-4	4"	$3.75	$3.25
0601828-6	6"	4.00	3.75
0601828-8	8"	5.50	4.95

Crescent® WRENCH 8" ADJUSTABLE WITH RAPID SLIDE

- Slide control in the handle provides smooth, fast and accurate jaw adjustment
- 1" (25.4mm) jaw capacity
- Laser-etched jaw opening indicator markings for SAE an metric-sized fasteners
- Extra-wide handle allows you to apply more force
- Drop-forged construction for maximum durability
- Polished head that makes cleanup easier and keeps tool looking like new.

Part No. 0601AC8NKWMP • Price: $19.90

Crescent® ADJUSTABLE RATCHETING SOCKET WRENCH

MODEL FR28SWMP

This revolutionary new tool replaces 28 most popular socket sizes. Fits hundreds of SAE and metric fasteners. Tightens or loosens with a flip of a switch.

- Dial adjusts jaws to exact size of fastener
- Jaw capacity 1/4" – 7/8" (6.35mm to 22.2mm)
- Rubberized comfort grip for extra control and power
- Meets ASME specifications
- Weight – 1.30 lbs.; 10.88" L x 6.88" W x 2.50" H

Part No. 0602FR28SWMP • Price: $27.95

Crescent® WIDE CAPACITY ADJUSTABLE WRENCHES

- **Wider Handle** – Increased Comfort, Reduced Fatigue
- **Hex Jaw Design** – Tighter Fit, Reduced Slippage
- **Tension Spring** – Stabilizes Jaw, Allows Knurl To Adjust
- **Heat Treated Forged Alloy Steel** – Increased toughness and durability
- Chrome plated

Part No.	Type	1-9	10+
0601AC-14	4"	$15.95	$15.25
0601AC-16	6"	15.90	15.25
0601AC-18	8"	16.90	16.50
0601AC-110	10"	23.50	22.50
0601AC-112	12"	31.95	29.95

3M ELECTRONIC VACUUM

- A powerful unit to clean up most business equipment including computers, copiers, fax and many other devices
- Advanced filtration allows you to pick up lint, cotton fibers, and toner from laser printer and copier.
- Comes complete with 10' stretch hose, wand crevice tool, crevice brush, dusting brush and needle nozzle.

Part No.	Description	Price
01VC	Field service vacuum cleaner	$256.95
01VCFIL1	Filter for extremely fine particles	27.95
01VCFIL2	Filter for toner and dust	19.95

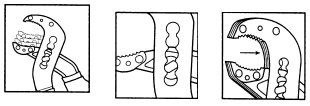
NIBBLING TOOL

- Ideal brand, cuts sheet metal like a pinch and die.
- Start with 7/16" hole and then "Nibbl" to the size required.
- Cuts round, square or irregular holes to any shape and size over 7/16".
- Cap. steel 18ga (0.46) maximum. Aluminum copper, plastic 1/16".

Part No.	1-9	10+
0602NT	$9.90	$8.90

Crescent® DURA-PLYERS™

- Laminated/riveted construction
- Textured air cushioned grips
- Box joint design – less slipping
- Multiple position jaws – wide application range



Part No.	Type	1-9	10+
0601R27CV	8"	$10.95	$9.95
0601R210CV	10"	11.95	11.25

Crescent® TONGUE AND GROOVE PLIERS SET

3 piece set (8", 10" and 12"). Made from finest quality tool steel, forged, hardened and tempered for long life. They meet strict ASME specs.

Part No. 0602R203SET • Price: $26.50

STANLEY TAPE MEASURES

- 7' standout
- 3/4" to 1" width blades

Part No.	Description	Price
060430-455	25'; 1"; Plastic yellow case	$8.80
060430-464	30'; 1"; Plastic yellow case	$10.45
060433-312	12'; 3/4"; Metal case	$13.75
060433-116	16'; 3/4"; W/power lock	$13.95
060433-425	25'; 1"; W/power lock	$20.50
060433-430	30'; 1"; W/power lock	$21.95
060433-835	35'; 1"; W/power lock	$23.50

STANLEY TAPE MEASURES MAX© WITH AIR LOCK

- Mylar polyester film on blade
- Easy to read

Part No.	Description	Price
060433-799	25'; 1"; 8' standout	$17.55
060433-716	16'; 1 1/4"; 11' standout	$21.50
060433-725	25'; 1 1/4"; 11' standout	$24.70
060433-730	30'; 1 1/4"; 11' standout	$28.65
060433-735	35'; 1 1/4"; 11' standout	$34.35
060433-740	40'; 1 1/4"; 11' standout	$38.65
060434-130	100'; 3/8"; 3-1 gear drive for fast rewind	$21.40

STANLEY TAPE MEASURE, 100FT.

FIBERGLASS OPEN REAL

- 1/2"wide blade, easy to read
- PVC blades makes it easy when realing in
- Printed on both sides with fractional/decimal

Part # 060434-170 · Price: $14.15

Lufkin® 100' STEEL MEASURING TAPE

HI-VIZ MODEL 100L

- Durable, hi-impact HI-VIZ orange case.
- 3/8" wide, 100' long steel tape.
- Yellow tape with easy to read black and red markings.
- Easy wind nylon drum. Hook ring retained in drum. Removable belt clip.

Part No. 0604100L · Price: $19.50

STANLEY 170 PIECE SOCKET SET

Features and Benefits
Stanley® drive tools are forged from high-quality steel and finished in high-polish nickel chrome or black chrome. Selected ratchets handles are ergonomically designed and have an easy-to-use, thumb operated reverse-switch mechanism. Sockets and extensions remain locked onto the drive until disengaged with an easy-to-reach, low-profile quick-release button.

All Stanley® ratchets, sockets and wrenches are manufactured globally, to Stanley specifications, meeting and often exceeding ANSI specifications

1/4" & 3/8" Dr. Pear Head Ratchet; 21, 1/4" sockets; 17, 3/8" sockets; extension bar; spark plug sockets and many more tools.

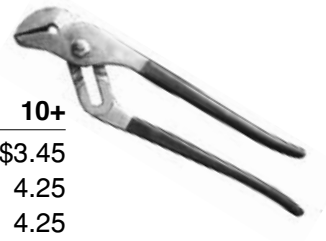
Part # 060296-011 · Price: $92.50

STANLEY MECHANICS TOOL KIT

- Chrome Vanadium forged body
- Fully polished chrome finish
- Quick release & reverse mechanism
- Durable carry case
- Lifetime warranty
- Meets and exceeds ANSI specifications

Part # 060296-010 · Price: $51.95

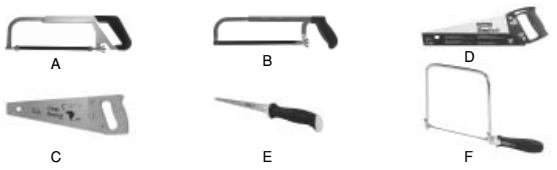
GROOVE JOINT PLIERS



- Drop forged.
- Fully polished.
- Cushion grip.

Part No.	Type	1-9	10+
0602984	6"	$3.95	$3.45
0602983	7"	4.50	4.25
0602981	10"	4.75	4.25

STANLEY SAW / HACKSAW



Part No.	Description	Fig	Price
060215-565	10" Blade, Adjustable Hacksaw	A	$3.95
060215-265	10" Blade, Rubber Grip Hacksaw	B	$10.80
060215-334	15" Blade, 9 points/in., Handsaw	C	$13.10
060215-579	15" Blade, 9 points/in., General purpose saw with plastic handle	D	$9.20
060220-556	6"; FatMax Jabsaw	E	$9.85
060215-106	Coping Saw FatMax	F	$4.95

PROXXON BENCH CIRCULAR SAW

Features:
- Machined and perfectly plane aluminum work table allows sliding the work piece easily.
- Sturdy ABS plastic housing.
- Side door to conveniently remove saw dust.
- Graduated mitre guide (0-90º) for angle cuts.
- Adjustable longitudinal fence for straight cuts.
- Practical tool storage compartment (Key for saw blade exchange)
- Includes: 28014 Super-Cut Saw Blade Ø 2-9/32' ' (58mm), 80 teeth.
- Fiberglass reinforced plastics can be cut with the Carbide Tipped Saw Blade 28011 (available as acces sory).
- Fixed arbor.
- Integrated suction device for connecting to a vacuum.

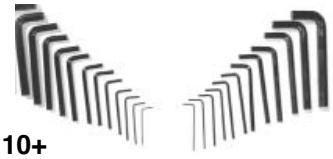
Part No. 90PX37006 • Price $138.95

7 PIECE METRIC HEX SET

Highest quality alloy 8650
Metric: 1.5, 2, 2.5, 3, 4, 5, 6 8mm.
English: $^{5}/_{64}$", $^{3}/_{32}$", $^{1}/_{8}$", $^{5}/_{32}$", $^{3}/_{16}$", $^{7}/_{12}$", $^{1}/_{4}$"

Part No.	Description	1-9	10+
0601616	Metric 7pc Set	$4.95	$4.50
0601HKR7C	English 7pc Set	4.95	4.50

25 PIECE HEX KEY WRENCH SETS



- Highest quality alloy 8650.
- Sizes: .05, $^{1}/_{16}$, $^{5}/_{64}$, $^{3}/_{32}$, $^{1}/_{8}$, $^{5}/_{32}$, $^{3}/_{16}$, $^{7}/_{32}$, $^{1}/_{4}$, $^{5}/_{16}$, $^{3}/_{8}$ plus metric sizes.
- Black oxide finish.

Part No.	1-9	10+
0601H25	$6.95	$6.50

STANLEY HAMMERS

Part No.	Description	Price
060451-621	16 oz.; Curve claw fiberglass	$9.75
060451-616	16 oz.; Curve claw wood handle	$6.20
060451-163	16 oz.; Rip claw FatMax	$20.45
060451-165	20 oz.; Rip claw FatMax	$21.50

STANLEY STAPLE/BRAD GUNS

MODELS: TR150; TR250, TRE550

- Easy-squeeze handle (TR150;TR250)
- Anti-jam mechanism saves time
- High-visibility yellow color easy to spot in a toolbox or workshop
- Durable aircraft-aluminum housing
- Delivers high power and deep penetration
- Uses Stanley® TRA700 or Arrow® T-50® staples & 1/2", 9/16" & 5/8" brads

Part No.	Description	Price
0604TR150	Staple gun only	$19.95
0604TR250	Manual staple/brad gun	$25.90
0604TRE550	Electric staple/brad gun	$31.95

STANLEY STUD SENSORS

MODELS: 100; 200

- LED display & buzzer indicated (Model 100)
- LCD screen with stud center detection (Model 200)
- Can read up to 3/4" depth
- Live wire warning (Model 200)

Part No.	Description	Price
060477-110	Model 100	$11.80
060477-720	Model 200	$19.95

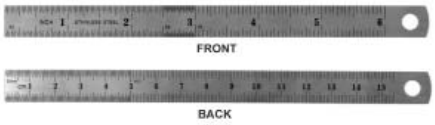
STANLEY LEVEL

NON-MAGNETIC / FATMAX
48" OR 72"

- Single piece of aluminum construction
- Two block vials for max. accuracy
- Two shock absorbant end caps

Part No.	Description	Price
060143-548	48" Long	$28.50
060143-572	72" Long	$48.10

RULERS

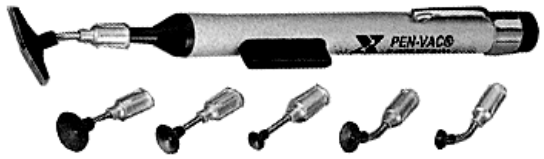


- Stainless steel
- Graduated in inches and mm

Part No.		1-9	10+
0604300	6" With Pocket Clip	$1.35	$1.20
0604769	12" Ruler S.A.E. / MM	1.95	1.75
0604T12	12" Rigid W/1/8", 1/16" 1/32", 1/64" Markings	6.96	5.95

XYTRONIC®

VACUUM PEN HANDLING TOOL

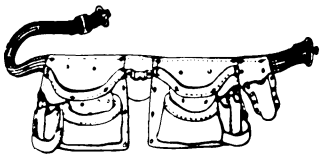


- Picks up 500g or less components
- Aluminum body that is ESD Safe
- Kit includes 6 tips and suction cups

Part No. 0603V8920 • Price $41.95

10 POCKET TOOL BELT

4 nail bags and 6 tool pockets for screwdrivers, pliers, etc. Plus 2 hammer holders, T-square pouch and steel holder. Riveted and heavy duty sewn construction. Polypropylene belt.



Part No.	1-9	10+
0612TB114	$22.95	$18.95

SHOP APRON WITH POCKET

Heavy duty denim bib apron with single pocket. 38" long with neck loop and waist ties.

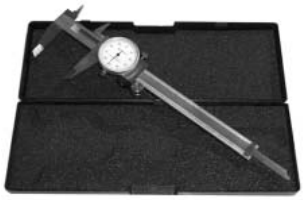
Part No.	1-9	10+
0612TB106	$11.95	$10.95

"Jorgensen®" "C" CLAMPS

Regular-duty design with drop-forged carbon steel frames for general purpose industrial service.

Part No.	Open Max	Depth of Throat	Dia. of Screw	Test-Load lbs.	Price
0601SCL402	2"	2"	1/2"	3,300	$19.75
0601SCL404	4"	2 3/4"	3/4"	4,100	27.95
0601SCL406	6"	3 5/8"	3/4"	5,400	37.50
0601SCL408	8"	4 1/2"	3/4"	5,900	49.20

6" UTILITY DIAL CALIPER



- Steel construction caliper
- 6" dial

Part No. 0604DC780 • Price: $17.95

DIGITAL CALIPER

DELUXE MODEL
6" OR 8"

- Inches / mm switchable
- Stainless steel construction

Part No.	Description	Length	Price
0604CAL8	Regular Display	8"	26.95
0604CAL6	Regular Display	6"	17.95

UTILITY MICROMETER

- Economical measuring device for beginners and hobbyists.
- Accuracy guaranteed to 0.001".
- Hex wrench is included for simple zero adjustments.
- Range 0 to 1".

Part No.	Description	Price
0604MM775	Metric (0–25mm)	$19.95
0604SA775	SAE (0-1")	$9.00

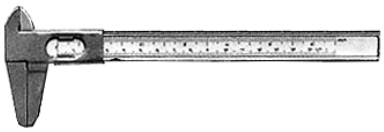
DIGITAL MICROMETER

0–1" RANGE

- Provides accurate, quick measurements
- 6 digit LCD readout
- Graduation .0001"
- mm/inch conversion button

Part No. 0604DGMRT • Price: $75.95

ECONOMY VERNIER CALIPER



Part No.	Description	1-9	10+
0604VC166	Plastic Frame – 6"	1.95	1.45

SKIL DRILL PRESS BENCH 10"

MODEL SK-3320

- 3.2 Amp, 3050 rpm.
- Laser x 2: 2 beam laser system.
- 8-1/2" x 9-7/8" tilting table.
- Adjustable depth stop.
- Bump off switch.
- Weighs 57 lbs.

Part No. 29DPSK3320 • Price: $160.00

DEWALT TABLE SAW COMPACT

MODEL DW745

Compact job site table saw; 15A; 3850 rpm speed 10" blade; 5/8" arbor size; 3 1/8" depth of cut at 90 ; 16" maximum rip to right of blade; 12" maximum rip to left of blade; tool wt. 64 lbs.

Part No. 29DW745 • Price: $429.00

DEWALT MITER SAW

10" COMPOUND MITER SAW

MODEL DW713

- 15 amp, 5000 rpm motor delivers extended power
- Machined base fence support
- Cam miter lock for quick and accurate miter table positioning
- 0–50 left and right miter capacity
- **Arbor size:** 5/8"; **Wt:** 35 lbs.
- **Vertical Capacity:** Baseboard against fence – 3 1/2"
- **Vertical Capacity:** Crown molding laying flat – 4 1/2"
- **90° Cross-Cut Capacity**: 4" x 4"
- **45° Bevel Cut Capacity:** 2" x 6"

Part No. 29DW713 • Price: $275.00

BLACK&DECKER PALM SANDER

MODEL QS900

- Powerful 2.0 Amp motor designed for best in class performance
- Built in dust collection for a cleaner work area
- New ConveXGRIP design with full body soft grips provide optimal comfort & control while sanding

Part No. 29BDQS900 • Price: $37.95

DEWALT WET / DRY VACUUM

CORDLESS, PORTABLE

MODEL DC515K

- 18V cordless
- 1/2 gallon
- 2.5 ft. hose
- 1 hour charge
- One 18V battery
- Wt. 6 lbs

Part No. 29DC515K • Price: $152.00

PORTER + CABLE COMPRESSORS

MODEL C2002 – COMPRESSOR ALONE
MODEL C2002WK – COMPRESSOR W/ACCESSORY KIT
MODEL CFBN125B – COMPRESSOR W/BRAD NAILER KIT

CFBN125B – Compressor w/Brad Nailer

Compressor (C2002)

- Oil-free pump for no maintenance
- 150 PSI pressure, 6 gallon pancake-style tank
- Low amp 120V motor starts easily
- Shipping Wt. 39 lbs.

Compressor with Accessory Kit (C2002WK)

- Same as ***C2002*** with addition of 13 piece kit
- **Accessory Kit:** 25 x 1/4" PVC air hose with coupler and plug assembled, tire chuck with plug assembled, blow gun with plug assembled, OSHA safety nozzle and four inflater adapters.

Compressor with Brad Nailer (1 1/4") Kit (BN125A)

- Same as ***C2002*** with addition of Brad Nailer
- **Brad Nailer:** Model BN125A uses standard 18Ga brads from 5/8" to 1 1/4" long
- Special hardened drive blade allows for Maximum durability and reliability

Part No.	Description	Price
29PCC2002	Compressor Only	$235.00
29PCC2002WK	Compressor w/Accessory Kit	245.00
29PCCFBN125B	Compressor w/Brad Nailer (1 1/4")	295.00

DEWALT JIG SAW COMPACT

MODEL DW317K

Compact jig saw kit, 0–3,100 strokes/minute, 1" stroke length, keyless blade clamp, 4 position orbital action.

Part No. 29DW317K • Price: $135.00

DEWALT JIG SAW CORDLESS

MODEL DC330K

18V cordless jig saw kit with keyless blade change. Includes jig saw blade.

- **Voltage:** 18V
- **Strokes/min.:** 0-3,000rpm
- Dust blower
- **Charger/Batteries:** 1 hr/ (1) 18V XRP™

Part No. 29DWDC330K • Price: $330.00

PROXXON DISC SANDER

Features:
• Powerful, vibration-free running due to a powerful and balanced DC motor.
Housing made of fiber glass reinforced POLYAMID.
• The sturdy die-cast aluminum machined worktable.
• The worktable can Tilt 50 inwards and 10 outwards (a scale facilitates accurate adjustment). for accurate angle sanding, also has a slot in the table for the adjustable mitre guide.
• Graduated mitre guide (0-90º) for angle cuts.
• Two additional square silicon sheets ensure that used discs can be stored and reused as necessary.
• Includes: Two 80 Grit Sanding Discs, Two 150 Grit Sanding Discs and Two 240 Grit Sanding Discs.
• Integrated suction device for connecting to a vacuum.

Part No.	Description	Price
90PX37060	Disc Sander	$241.95
90PX28160	Replacement Adhesive 5 Discs; 80 Grit	11.50
90PX28162	Replacement Adhesive 5 Discs; 150 Grit	11.50
90PX28164	Replacement Adhesive 5 Discs; 240 Grit	11.50

STANLEY SCRATCH AWL #7

Scratch Awl, Shank
Size 3 1/8 Inch, Wood Handle
With Two Flat Sides

Part No. 060269-122 · Price $4.45

JORGENSEN® VICE GRIP

6" Long Nose

The 92001 Locking Pliers are made from alloy steel for strength and durability. These pliers are adjusted easily with a slight turn of the screw adjustment. The jaws to grip at any angle and induction hardened for durability. The guarded release lever reduces the chances of accidental release.

Part No. 060411306 · Price $5.75

JORGENSEN® "C" CLAMP

4" Adjustable

Part No. 060ADJ1440 · Price $6.95

JORGENSEN® QUICK GRIP CLAMP

6" Jaw

ISD3 clamps feature a unique expandable design; which allows two clamps to be combined into one single clamp. This provides the user to add an additional 6" of clamping length to their bar clamps when combined by using a quick release knob for easy changes to the expanded or reversible position. These clamps also offer a 76 increase in clamping pressure over the 500QC QuickGrip series clamps. The ISD3 still feature the Dual Durometer handles and are truly a Woodworking Capable clamp.

Part No. 0601J33406 · Price $15.25

JORGENSEN® BAR CLAMP

18" Jaw

The Jorgensen Style ISD-3 Bar clamps are one of the most popular additions to the clamping line. The increase in clamping force make them a truly woodworking capable clamp.

Part No. 0601J33418 · Price $18.20

PROXXON POWER CARVER

Features:
• The main housing is made of glassfiber-reinforced polyamide and features a gearbox casing made of die-cast aluminium for precise locations of the ball bearings and stability under load.
• The tool is very safe, as the reciprocating action does not start until the chisel is pressed into the wood.
• Cleanly carving with no dust and virtually no effort.
• The rapid cutting action of the MOS (10,000 cuts per minute) allows the ability to do fine work like adding details as well as roughing out.
• On/off switch located at the upper back of unit
• The tool is exceptionally quiet, yet very powerful due to the permanent magnet maintenance-free motor.
• Accepts a variety of Flexcut® reciprocating chisels
• Three high-grade Japanese razor sharp bimetal chisels included: one flat chisel, one fingertip ('U' shape) chisel and one V-parting chisel.

Part No. 90PX38644 · Price $185.00

PROXXON SCROLL SAW

Features:
• Machined and perfectly plane aluminum work table allows sliding the work piece easily.
• Sturdy ABS plastic housing.
• Side door to conveniently remove saw dust.
• Graduated mitre guide (0-90º) for angle cuts.
• Adjustable longitudinal fence for straight cuts.
• Practical tool storage compartment (Key for saw blade exchange)
• Separate on/off switch and speed control dial for perfect speed every time.
• Very stable ribbed die-cast aluminum saw frame.
• Blade guide equipped with integrated blower.
• Patented head-part is height adjustable in three position and offer numerous advantages (See illustrations below)
• 4 Scroll saw blades are supplied (2 x 28 TPI & 2 x 17 TPI). Uses standard 5'' scroll saw blades.
• Integrated suction device for connecting to a vacuum.

Part No. 90PX37088 · Price $185.00

"Jorgensen"®

BENCH VISE PROFESSIONAL 30000

The efficient design makes adjustable ductile/steel bench vises stronger than comparable vises of similar weight. Heavy cold-formed steel channel beams cover and protect the screws of these vises and add to their great strength. The Style No. 30000 vises feature swivel bases with dual lock-nuts, replaceable hardened-steel serrated jaw faces, large ground and polished anvils, permanent pipe jaws and large forming horns.

Part No.	Description	Price
0601PBV30404	4" Jaw Width; 4" Max. Opening; 19 lbs	$47.60
0601PBV30606	6" Jaw Width; 6" Max. Opening; 35 lbs.	80.75
0601PBV30808	8" Jaw Width; 8" Max. Opening; 45 lbs.	122.95

"Pony"®

MEDIUM-DUTY VISE 27000

WOODWORKER'S VISE

This light and medium duty vise features double guide-bars, continuous screw action and solid steel dog.

7" jaw width – with 9" opening capacity.

Castings – gray iron with orange baked-enamel finish.

Jaws – drilled and tapped or countersunk holes for attachment of wood facings.

Dog – solid steel.

Part No. 0601MDV27091 • Price: $40.70

"Pony"®

DRILL PRESS VISE 29000

This "Pony' drill press vise is designed for the home workshop. The 4" opening capacity will allow the user to clamp a wide range of products for safe drilling. This vise has slots along each side for easy of mounting to any drill press. The jaws and 4" wide and have a throat depth of 1/2".

Part No. 0601SDP29058 • Price: $19.35

JORGENSEN®

BAR CLAMP *12" Jaw*

The Jorgensen Style ISD-3 Bar clamps are one of the most popular additions to the clamping line. The increase in clamping force make them a truly woodworking capable clamp.

Part No. 0601J33412 • Price $10.80

JORGENSEN®

PONY® BAND CLAMP

Ideal for irregular and awkward shaped clamping projects the Pony Style 1200 15 ft. Band Clamp features a band that holds odd-shaped work-pieces. This clamp also has a rust-proof steel frame. This clamp comes with a 1 in. x 15 ft. nylon band with a 1,000 lb proof test, 4 corners and 1 plated steel wrench.

Part No. 0601P1215 • Price $10.80

JORGENSEN®

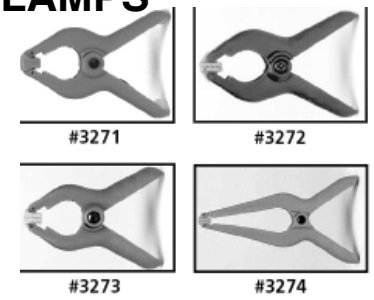
WELDING CLAMP

- Hardened and tempered.
- U-Shape
- Adjustable Mechanical Locking
- Drop Forged Steel
- Nickel Plated
- Locking Pliers
- Meets or exceeds Federal and ANSI specifications

Part No. 060411409 • Price $8.45

"Pony"®

SPRING CLAMPS



These Micro/Mini Plastic Spring Clamps are ideal for hobbyist, crafts or any light-duty project that requires instant opening and closing and where fast, easy application to or removal from the work is required.

Part No.	Description	Price
0601SC3271	Micro Spring – Jar of 50	$19.30
0601SC3272	Mini Spring – Jar of 50	27.35
0601SC3273	Mini Wide-Jaw – Jar of 35	22.45
0601SC3274	Long Nose – Jar of 40	26.55

PUNCHDOWN TOOL

- Impact type (24PDT4)
- Adjustable impact pressure
- Suitable for 66 and 110 terminal blocks

Part No.	Description	1-9	10+
24PDT4	Impact Tool	$25.95	$23.95
24PDT1	Non Impact Tool	9.50	7.50
24PDB-HT14	Blade for 66 Block	6.95	5.95
24PDB-HT14B	Blade for 110 Block	6.95	5.95

CRIMPING TOOLS FOR MODULAR PLUGS

- Cuts and strips
- Crimp RJ11/RJ12/RJ45
- Insulated grip

Part No.	Description	Price
24CTHT210	RJ45 (8P8C) Only	$10.95
24CTHT546	RJ11/12 (6P 6C) & Handset (4P 4C)	15.95
24CTHT599	RJ11/RJ12 (6P 6C) & RJ45 (8P 8C)	19.95
24CTHT568R	RJ11/12 (6P 6C) & RJ45 (8P 8C)/Ratchet	26.95

CRIMPING TOOL SET

- 8" modular crimping tool.
- Cuts, strips and crimps.
- Crimps RJ45, RJ12, RJ11, 6P6C offset, DEC plug, 4P4C, 4P2C.
- Includes 90 modular plugs: 40–4P4C plugs, 30–6P6C, 20–8P8C.
- Hard blow molded carrying case 8" x 10.5" x 2"; **Weight**: 2.1 lbs.

Part No.	Price
24CTS2000B	$89.90

CRIMPING TOOL SET

- 7" tool, frame made of steel, light weight, compact, durable and with ratchet mechanism.
- Crimps: RJ45 (8P), RJ12 (6P), RJ11.
- Includes universal wire stripper 0602HT501.
- Includes 60 modular plugs: 30–8P8C; 30–6P6C.
- Hard blow molded case.

Part No.	Price
24CTS2568AR	$44.95

REMOTE TELEPHONE & DATA LINE TESTER

For testing *remote* continuity of telephone and data lines using 4, 6 and 8 conductor plugs (RJ_{11} and RJ_{45}). Can also test coax cables with BNC connectors. Tests up to 10,000 ft. 1 sec. test time 5 mA max. 9V battery included.

Part No. 34DT02 • Price: $65.00

UNIVERSAL CRIMPING TOOL

RATCHET TYPE

- Deluxe 9" tool of 3mm thickness
- Interchangeable die sets
- Crimps RJ-11, RJ-12, RJ-45 connectors
- Crimps BNC connectors using RG58, RG59, RG6 coax
- Crimps F-connectors using RG59, RG6 coax
- Crimps insulated and non-insulated terminals

Part No.	Description	1-9	10+
24CTFRAME	Universal Tool W/O Dies	$19.95	$17.95
24CT6P	Die for RJ11 (4P, 2C; 4P, 4C; 6P, 4C; 6P, 6C)	8.90	8.25
24CT8P	Die for RJ45 (8P, 8C)	8.90	8.25
24CTHT301C	Die for BNC Connector Using RG58, RG59, RG6	8.90	8.25
24CT1328	Die for F Connector Using RG59, RG6	8.90	8.25
24CT336H	Die For Insulated Terminals 10 to 22 AWG	8.90	8.25
24CT236C	Die For Non-Insulated and Inter-Locking Terminals 10 to 20 AWG	8.90	8.25

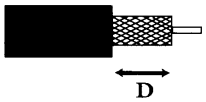
UNIVERSAL STRIPPING TOOL – 4"

Strips outer insulation of flat and round multiconductor cable from 3.5mm – 9mm max. It can even handle irregular out-shape of insulation.

Part No.	Price
0602HT501	$8.75

COAX CABLE STRIPPER

- Strips the coaxial jacket and inner conductor in one operation
- 2 blade model
- Suitable for RG58/59/62/6



D = 4, 6, 8, 12mm

Part No.	Price
0602HT332	$10.50

RSR TELEPHONE AND DATA LINE TESTER

- Can remotely test cables that terminate with RJ45 or RJ11 connectors.
- Cable length up to 10,000 yards.
- Gold plated connectors.
- LED bars indicate the test status.
- Powered by 9V battery.
- Can be used for testing: Ethernet, 10 Base-T, EIA/TIA-568A, EIA/TIA-568B, AT&T 258A, Token Ring, USOC8/6/4, DEC JMM.

Part No. 01LAN922 • Price: $58.00

TEXAS INSTRUMENTS

TI-30X IIS SOLAR SCIENTIFIC

10 DIGIT / 2-DIGIT EXPONENT LCD

- Algebraic Operating System
- Scientific, Trignometric, Statistical Functions
- 3 Memories, Constant Memory
- Includes slide case, manual & reference card

Part No. 02TI30XSOLAR • Price: $15.75

TEXAS INSTRUMENTS

TI-83 GRAPHING CALCULATOR

EASY-TO-USE GRAPHING TOOL WITH ADVANCED STATISTICS AND FINANCE

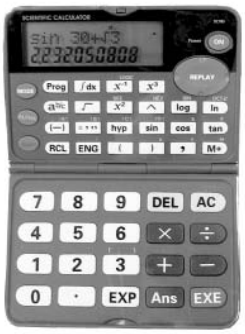
- High contrast display.
- Many graph styles including normal, thick, dotted.
- Financial Functions: Includes Time-Value-of Money, uneven cash flows, and amortication
- Split screen allows you to trace the graph and scroll table values simultaneously
- Complex numbers: operations performed in rectangular or polar format.
- Includes keystroke programming commands for conditional tests, jumping, and loops.
- Assembly language programming capabilities.
- Four plot types including scatter, box-and-whisker, xy-line, histogram, and normal probability plots.
- Allows linking with TI-83s, TI-82s, CBLs™, CBRs™ and computers.
- Store and analyze up to 10 matrices
- Define, save, and graph up to 10 rectangular, 6 parametric, and 6 polar functions, in addition to 2 recursively-defined sequences.
- Advanced statistics: Includes hypothesis testing and confidence intervals. Store data in lists containing up to 999 elements per list.

Part No. 02TI83 • Price: $105.00

LOWEST PRICES GUARANTEED!

PROGRAMMABLE FOLDING SCIENTIFIC CALCULATOR

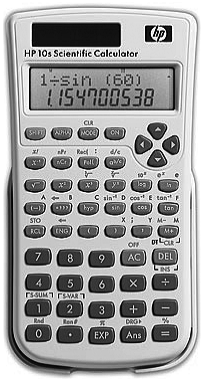
MODEL T185



- 10 + 2 digits 2-line LCD display
- 279 functions
- Multi-replay
- Fraction
- Differentiation and integration
- 2-Variable statistical calculations
- Base-n calculations
- Programmable with 360 bytes memory and up to four programs
- Folding case
- Auto power off

Part No. 02T185 • Price: $11.95

10S SCIENTIFIC CALCULATOR



- Do advanced calculations such as those involving statistics and conversions; solve inverse functions in algebra and trigonometry
- Find mean, standard deviation, variance, and more with the statistics editing capability
- Solve a wide range of problems with the four basic operations: +,-,*,/
- Calculate permutations, combinations, and factorials at the push of a button
- Simplify engineering applications with the decimal point selection.

Part No. 02HP10S • Price: $12.95

3 MODE CALCULATOR

CLOCK, CALCULATOR, TELEPHONE DIRECTORY

MODEL MD164A

- Three functions (telephone directory, calculator and clock)
- Two line LCD with 10 letters for name and 12 digits for telephone number.
- Stores up to 50 names and telephone numbers.
- Searches data with one key.
- 8 digit calculator with hard cover.
- User selectable 12/24 hour system clock.
- Auto power off.

Part No. 02MD164A • Price: $11.95

CASIO® FX-260 SOLAR

10+2 DIGITS / 144 FUNCTIONS

- Solar power type standard scientific model
- Standard deviation
- Permutation, Combination
- Comes with slide-on hard case
- New case with plastic keys

Part No. 02FX260 • Price: $11.50

CASIO® FX-115

TWO WAY POWER, 10 DIGIT

Scientific calculator with 2-line display. Expression and result can be displayed at the same time. Permitted for use on SAT and PSAT/NMSQT examinations. Two-way power feature. Statistical calculations with STAT-Data Editor. Solve calculation and formula memory (CALC). Complex calculations, equation calculations. Numerical differentiation and integration. Multi-replay function provides capability to backtrack step-by-step through calculations after you perform them. Edit expressions and recalculate. Slide-on hard case. Suggested courses: physics, statistics, trig, precalc, algebra I & II, pre-algrbra, geometry and general match.

Part No. 02FX-115 • Price: $19.25

CASIO®
FX-300 SOLAR

8 DIGIT / 206 FUNCTIONS

True algebraic system, 18 levels of parentheses, 6 constant memories and 1 independent memory. Turbo high speed, auto power off. Includes protective hard case.

Part No. 02FX300S • Price: $14.75

SHARP
EL531 8 DIGIT/BATTERY

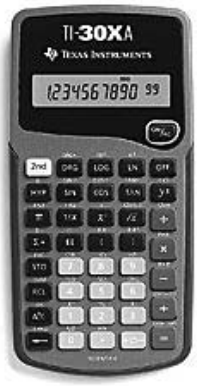
61 FUNCTIONS

Large 8-digit easy-to-read liquid crystal display. 46 pre-programmed scientific and statistical functions including trigonometric inverse trigonometric, logarithmic, and others. 3 angle modes (degree/radian/grad). exchange memory. 15 levels of parentheses with up to 4 pending operations. Independently accessible 4-key memory. Auto Power-Off. Large keys for comfortable operation. Memory Safe Guard Batteries included.

Part No. 02EL531 • Price: $10.50

TEXAS INSTRUMENTS
TI-30XA SCIENTIFIC CALCULATOR

FOR GENERAL MATH AND SCIENCE



- Fractions and fraction/decimal conversions.
- Scientific functions include: trigs and hyperbolic trigs, logs and natural logs, roots and powers, reciprocals and factorials.
- One-variable statistics.
- Polar/rectangular conversions and degrees, minutes, seconds/decimal degrees conversions.
- Combinations and permutations.
- Manual and quick reference card included.
- 10-digit display with 2-digit exponent.

Part No. 02TI30X • Price: $12.90

SHARP
EL506 10 DIGIT/BATTERY

93 FUNCTIONS

93 preprogrammed scientific and statistical functions including 3-variable linear equations, logical operations, FSE (fixed decimal point, scientific and engineering notation, and display format exchange) and other. Complex number calculations. 15 levels of parentheses with up to 4 pending operations. Constant power, reciprocal and chain calculations. 3 key memories x 2. Decimal setting (TAB key). Auto Power Off. Memory Safe Guard. Batteries included.

Part No. 02EL506 • Price: $15.95

TEXAS INSTRUMENTS
TI-34 II SOLAR / BATTERY

10 DIGIT / 72 FUNCTIONS

Flexible neck display. Statistic capabilities include mean, standard deviation and sum of entered date. Bright color-coded keyboard featuring large easy-to use keys. Solar powered, 10 digit, 2 exponent display.

Part No. 02 TI-34Solar • Price: $19.95

TEXAS INSTRUMENTS

TI-83 GRAPHING CALCULATOR

EASY-TO-USE GRAPHING TOOL WITH ADVANCED STATISTICS AND FINANCE

- High contrast display.
- Many graph styles including normal, thick, dotted.
- Financial Functions: Includes Time-Value-of Money, uneven cash flows, and amortication
- Split screen allows you to trace the graph and scroll table values simultaneously
- Complex numbers: operations performed in rectangular or polar format.
- Includes keystroke programming commands for conditional tests, jumping, and loops.
- Assembly language programming capabilities.
- Four plot types including scatter, box-and-whisker, xy-line, histogram, and normal probability plots.
- Allows linking with TI-83s, TI-82s, CBLs™, CBRs™ and computers.
- Store and analyze up to 10 matrices
- Define, save, and graph up to 10 rectangular, 6 parametric, and 6 polar functions, in addition to 2 recursively-defined sequences.
- Advanced statistics: Includes hypothesis testing and confidence intervals. Store data in lists containing up to 999 elements per list.

Part No. 02TI83 • Price: $99.00

TEXAS INSTRUMENTS

TI-89 TITANIUM

Introducing TI's most powerful graphing calculator: The TI-89 Titanium, offering new features, preloaded Apps, and even more versatility. A built-in USB port makes data transfer ultra-convenient. Plus, with three times the memory of the TI-89, you can store more Apps, data, and programs.

The TI-89 Titanium's advanced functionality and 3-D graphing make problem-solving for AP*, advanced mathematics, and engineering courses infinitely easier. It's the most powerful TI graphing calculator allowed for use on the AP* Calculus, AP Statistics, AP Physics, AP Chemistry, PSAT/NMSQT**, SAT® I , SAT II, and Math IC & IIC exams.

- 16 preloaded Graphing Calculator Software Applications (Apps), including EE*Pro®, CellSheet™ & NoteFolio™
- 3x the Flash memory of the TI-89
- Built-in USB port with cable
- CD with operating manual
- All of the features & functionality of the TI-89
- Preloaded with Official AP Calculus exam review questions

Part No. 02TI89 • Price: $154.00

CASIO®

9750 GII

- REF/RREF Function
- Random Integers
- Unit Conversion
- New types of regressions
- Chi-squared GOF function
- 9 new probability functions
- Pie charts & Bar Graphs
- Graph X=f(Y)

Part No 02FX9750GII • Price: $56.90

TEXAS INSTRUMENTS

TI-92 GRAPHING CALCULATOR

THE POWER OF A COMPUTER LAB

- **Link port:** Allows linking between TI-92s, CBLs™, CBRs™, and a computer.
- **High-resolution display:** 128 x 240 pixels. Allows viewing information with a wide variety of split-screen options.
- **Built-in applications:** Geometry, Text editor, Matrix calculations, Statistics, Programming.
- **Text editor:** Store and retrieve information. Computer-like features: QWERTY keyboard with CUT, COPY, PASTE, and FIND.
- **Programming:** Custom menus, dialog boxes, and pop-up windows provide complete control of the graphical interface. User-defined functions extend and enhance built-in functionality.
- **3D surface plots:** Are available as either wire frame or hidden surface. The window editor controls both the viewing cube and "eye" perspective.
- **Split screens**: Allow the viewing of any two applications simultaneously. Tables are available in function, parametric, polar, and sequence modes.
- **Geometric constructions:** Can be built interactively with points, lines, polygons, circles, and other basic geometric objects.
- **Prior entries**: Can be retrieved from active home history screen. Make changes and enter again to get new results.

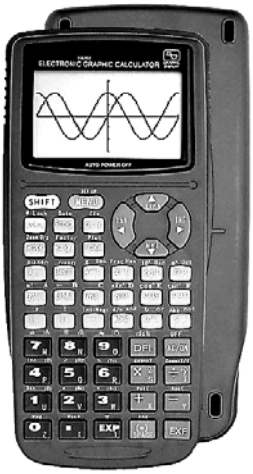
Part No. 02TI92 • Price: $199.00

YOU ALWAYS GET
THE LOWEST PRICES
AT ELECTRONIX EXPRESS!

GRAPHING CALCULATOR

252 SCIENTIFIC FUNCTIONS

MODEL TG202



- Large 128 x 64 dots display (16-digits x 8 lines).
- **Advanced Graphing Power**: 20 built-in graphing functions, trace and zoom features, and parametric graphic function.
- **Fraction Calculations**: Conversions of fractions, mixed numbers and decimal numbers.
- **Programming Capability:** 10 user defined programs of 111 steps each.
- One and Two-variable statistics calculations.
- **4 Regression Analysis Modes:** Linear, logarithmic, exponential and power regressions.
- Trigonometry, Bin / Hex / Oct operations, logic operations
- **Power Source;** 2 x AAA batteries (Main), 1 x CR2032 (Back up).
- **Size:** 7.3" x 3.3" x 0.9"

Part No. 02TG202 • Price: $64.95

USB KEYPAD +TAX CALCULATOR

- USB keypad via PC link — USB cable included. Send calculations directly to your computer
- Tax calculation
- Percent key (%)
- Shift back key
- Sign change key (+/–)
- Dual power (battery and solar)
- Auto power off
- Durable metal panel
- Durable plastic keys
- Size: 5.98 x 3.81 x 0.81 in.
- Batteries included

Part No. 02TPC102 • Price: $16.95

8-DIGIT DUAL-POWER CALCULATOR

MODEL 216-8

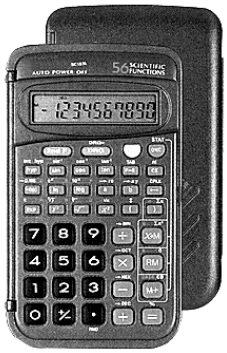
- 8-digit hand-held
- Large LCD display
- Dual Power
- 3 Memory Keys
- Percentage
- Square Root
- Plus/Minus
- Auto Power off
- **Size:** 4.37 x 2.44 x 0.35 inches

Part No. 02TU216-8 • Price: $4.50

SCIENTIFIC CALCULATOR

10 DIGIT; 56 FUNCTIONS

MODEL SC107A

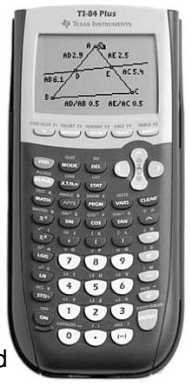


- 56 preprogrammed functions.
- Complex number calculations.
- Base-n calculations.
- Random number key.
- 3 regular modes.
- Comes with protective hard case.
- Auto power off.

Part No. 02TSC107A • Price: $8.75

TEXAS INSTRUMENTS

TI-84 PLUS

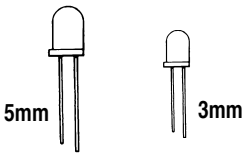


- Electronically upgradeable graphing calculator allows you to have the most up-to-date functionality and software applications (Apps).
- 2.5 times the processor speed of the TI-83 Plus.
- 480 KB FLASH ROM memory for data archive and storage of Apps.
- 24KB of available RAM memory.
- USB port for computer connectivity, unit-to-unit communication with TI-84 Plus and TI-84 Plus Silver Edition graphing calculators, and more.
- I/O port for communication with other TI products.
- Internal Clock with date and time display.
- TI Connectivity Cable included.
- TI Connectivity Cable and TI Connect™ software allow information to be transferred to and from a computer and printed or stored on disk.
- Included Apps: Cabri® Jr., Vernier EasyData™, Conic Graphing, Inequality Graphing, LearningCheck™, Probability Simulations, Science Tools, StudyCards™, Topics in Algebra 1, Chapter 5, Topics in Algebra 1, Chapters 1-4, Transformation Graphing

Part No. 02TI84PL • Price: $129.00

BIPOLAR LED

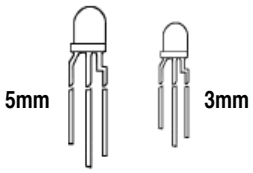
- Color change on reverse voltage
- White diffuse lens



Part No.	Description	Size	1-9	10+
08LHG3362	Red to Green	5mm	$0.25	$0.20
08LEG3362	Orange to Green	5mm	0.25	0.20
08L5017YGW	Yellow to Green	5mm	0.25	0.20
08L5017UEUGW	Bright Red to Bright Green	5mm	0.30	0.25
08L3017SGW	Red to Green	3mm	0.25	0.20
08L3017EGW	Orange to Green	3mm	0.25	0.20
08L3017YGW	Yellow to Green	3mm	0.25	0.20
08L3017UEUGW	Bright Red to Bright Green	3mm	0.30	0.25

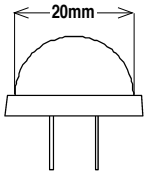
DUAL COLOR LED

- White diffuse lens
- Two different colors depending on leads used
- 170 viewing angle.



Part No.	Description	Size	1-9	10+
08LEG3392	Red/Green	5mm	$0.25	$0.20
08LYG3392	Yellow/Green	5mm	0.25	0.20
08L3015EGW	Red/Green	3mm	0.25	0.20
08L3015YGW	Yellow/Green	3mm	0.25	0.20

BIG DOME 20MM LEDS



- 6-chip LEDs
- Choice of 5 colors
- Wide-angle illumination
- 4 pin DIP socket compatible
- Luminous intensity, 30–45 mcd

Part No.	Emitted Color	1-9	10+
08C20ZUHR	Red	$0.80	$0.70
08C20ZYO	Amber	0.80	0.70
08C20ZUG	Green	0.90	0.80
08C20ZB	Blue	3.20	2.90
08C20ZW	White	3.50	3.20

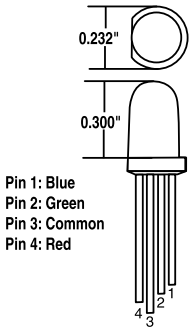
LED TESTER

- LED Tester (pocket size) provides a quick way to check color, brightness and uniformity
- Provides 2, 5, 10, 20, 30, 50 mA drive current with a push of a button
- 7 middle positions set at 10mA allows comparison of several LEDs
- Requires 9V battery *(not included)*

Part No. 08LEDTST • Price:$7.95

MULTI COLOR LED

- 256 color capability with red, green and blue chips
- High intensity
- Water clear lense
- Reliable, rugged, long life
- Low power requirement
- **V_F (forward voltage):** Red = 2V, Green = 3.5V, Blue = 3.5V
- **Luminous Intensity:** 800 to 4000 mcd @ 20mA



Part No.	Description	1-9	10+
08L5015RGBC	Common Anode (Pin3)	$0.95	$0.75
08LMC-C	Common Cathode (Pin 3)	$0.95	0.75
08LHHRBG	Common Cathode (Pin 3) Pin 1: Green, Pin 2: Blue	$0.95	0.75

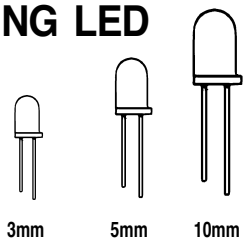
BLINKING LED – THREE COLORS

- Color change from red to green to blue
- T 1 3/4 – clear lense; light output 800 to 2400 mcd
- Ideal for alarm, projects and industrial applications

Part No.	1-9	10+
08LCHRGB	$1.95	$1.75

FLASHING LED– BLINKING LED

- 3.0/5.0/10.0mm round type LED lamps
- Standard to ultra brightness
- Various viewing angles
- Diffused and water clear lenses
- Popular T01 diameter package
- IC compatible / low current capability



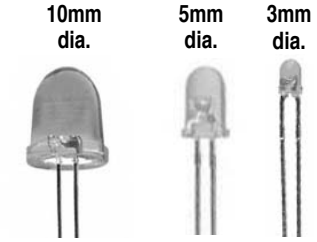
No current limiting resistors needed. Simply apply DC voltage. *(See datasheets at http://www.elexp.com/opt_6bid.htm for specific voltage requirements to make it blink.)*

Part No.	Color	Lense Color	Size	1-9	10+
08L36BID	Red	Red	3mm	$0.60	$0.50
08L36BGD	Green	Green	3mm	0.60	0.50
08L36BYD	Yellow	Yellow	3mm	0.60	0.50
08L56BID	Red	Red	5mm	0.70	0.55
08L56BGD	Green	Green	5mm	0.80	0.65
08L56BYD	Yellow	Yellow	5mm	0.80	0.70
08L56BBD	Blue	Blue	5mm	0.90	0.80
08L5013SRC-B	Ultra Red	Clear	5mm	0.75	0.60
08L5013UGC-B	Ultra Green	Clear	5mm	0.80	0.65
08L5013UYC-B	Ultra Yellow	Clear	5mm	0.80	0.65
08L5013UBC-B	Ultra Blue	Clear	5mm	0.90	0.80
08L96BIF	Red	Clear	10mm	0.80	0.65
08L96BGD	Green	Clear	10mm	0.85	0.70
08L96BYD	Yellow	Clear	10mm	0.85	0.70
08L96BBD	Blue	Clear	10mm	0.90	0.75

SUPER BRIGHT LEDS

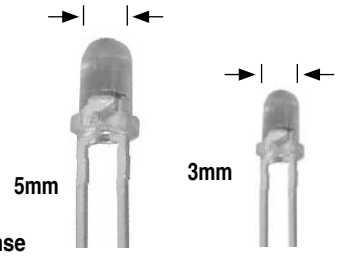
BLUE / WHITE / GREEN / RED / YELLOW / ULTRA VIOLET

- Water clear lens
- **Typical Intensity:** 700 mcd to 5000 mcd @ 20mA
- **Color When Lit**: Red, Green, Yellow, Blue and White
- Viewing Angle: 30



Part No.	Fig.	Color Emitted	A mcd	B 1-9	C 10+
08LCHR10	A	Red	2,000	$0.40	$0.30
08LCHG10	A	Green	2,000	0.75	0.70
08LCHY10	A	Yellow	1,600	0.40	0.30
08LCHB10	A	Blue	1,200	0.75	0.70
08LCHW10	A	White	4,000	1.10	1.00
08LCHR5	B	Red	5,000	0.25	0.20
08LCHG5	B	Green	4,000	0.50	0.40
08LCHY5	B	Yellow	2,500	0.25	0.20
08LCHE5	B	Amber	1,800	0.20	0.15
08LVB3330D *(Diffused Lens)*	B	Blue	200	0.55	0.50
08LCHUV5	B	Ultra Violet	130	0.70	0.65
*USE PROPER EYE PROTECTION FOR UV LED					
08LCHW5	B	White	5,000	0.50	0.40
08LCHR3	C	Red	3,000	0.25	0.20
08LCHG3	C	Green	4,000	0.50	0.40
08LCHY3	C	Yellow	2,500	0.25	0.20
08LCHB3	C	Blue	1,500	0.45	0.35
08LCHW3	C	White	4,000	0.50	0.40

LEDS - CLEAR COLOR LENS



Part No.	Emitted Color	Lense Color	Size	1-9	10+
08L5012CHTS	Red	Red	5mm	$0.10	$0.07
08L5012CGTS	Green	Green	5mm	0.10	0.07
08L5012CYTS	Yellow	Yellow	5mm	0.12	0.09
08L5012CECS	Orange	Clear	5mm	0.12	0.09
08L3012CHTS	Red	Red	3mm	0.10	0.07
08L3012CGTS	Green	Green	3mm	0.10	0.07
08L3012CYTS	Yellow	Yellow	3mm	0.12	0.09
08L3012CETS	Orange	Orange	3mm	0.12	0.09

SUPER BRIGHT WHITE LED

WIDE VIEWING ANGLE

- Clear lense
- 120 viewing angle
- 700 mcd output

Part No.	1-9	10+
08LCHW5-WD	$1.10	$1.00

LEDS – DIFFUSED LENS

Part No.	Color	Fig.	1-9	10-99	100+
STANDARD – 5MM					
08L53RD	Red	A	$0.12	$0.08	$0.05
08L53HD	Bright Red	A	0.14	0.10	0.06
08L53GD	Green	A	0.14	0.10	0.07
08L53YD	Yellow	A	0.16	0.12	0.08
08L53ED	Amber	A	0.16	0.12	0.08
08L53WD	Red (Clr Lens)	A	0.12	0.08	0.05
08LVB3330D	Blue	A	0.55	0.50	0.45
SMALL – 3MM					
08L32RD	Red	B	$0.12	$0.08	$0.05
08L32GD	Green	B	0.14	0.10	0.07
08L32YD	Yellow	B	0.16	0.12	0.08
LARGE – 8MM					
08L803ID	Red	C	$0.27	$0.21	$0.16
08L803GD	Green	C	0.30	0.24	0.20
08L803YD	Yellow	C	0.34	0.28	0.23
JUMBO ROUND – 10MM					
08L3630HD	Red	D	$0.25	$0.20	$0.15
08L3630GD	Green	D	0.30	0.25	0.20
08L3630YD	Yellow	D	0.30	0.25	0.20
PC MOUNT					
08L72CB1IDA	Red	E	$0.30	$0.25	$0.20
08L72CB1GDA	Green	E	0.40	0.30	0.25
RECTANGULAR					
08L1043RD	Red	F	$0.15	$0.12	$0.08
08L1043GD	Green	F	0.17	0.14	0.10
08L1043YD	Yellow	F	0.22	0.19	0.15

ULTRA BRIGHT LEDS

Lense: Water clear, T1 3/4 (5mm).
Typical Intensity: 1000mcd to 3,000mcd.

Part No.	Luminous Intensity @20mA	Color Emitted	Viewing Angle	1-9	10+
08LHR3833	1300mcd	Red	12	$0.20	$0.14
08LUR3333	2000mcd	Red	20	0.30	0.26
08LUR3333/HO	1500mcd	Red	40	0.30	0.26

WHITE AND BLUE LEDS

SUPER BRIGHT – WATER CLEAR LENS

Part No.	Color	Size	Luminous Intensity	Forward Voltage	1-9	10+
08LCHW5	White	T1 3/4	5000mcd	3.2	$0.50	$0.40
08LCHB5	Blue	T1 3/4	1500mcd	3.6	0.40	0.35

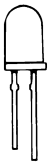
5V, 12V LEDS

HIGH VOLTAGE LEDS

No need to use current limiting resister. Hook up directly to +5V or +12V. Diffused lens, T 1 3/4 size. (5mm dia.)

Part No.	Description	1-9	10+
08LI3330/HV5	5V, Red	$0.50	$0.45
08LG3330/HV5	5V, Green	0.50	0.45
08LY3330/HV5	5V, Yellow	0.50	0.45
08LI3330/HV12	12V, Red	0.50	0.45
08LG3330/HV12	12V, Green	0.50	0.45
08LY3330/HV12	12V, Yellow	0.50	0.45
08LB3330/HV12	12V, Blue	0.95	0.90
08LW3330/HV12	12V, White	0.95	0.90

ULTRA BRIGHT LEDS



Lense: Water clear, T1 3/4 (5mm).
Typical Intensity: 1000mcd to 3,000mcd.

Part No.	Luminous Intensity @20mA	Color Emitted	Viewing Angle	1-9	10+
08LHR3833	1300mcd	Red	12	$0.20	$0.14
08LUR3333	2000mcd	Red	20	0.30	0.26
08LUR3333/HO	1500mcd	Red	40	0.30	0.26

INDICATOR LAMPS

W / LEADS

Lead length 6", various voltages; plastic colored lens caps (*opt.*).

Part No.	Descr.	1-9	10+
090GW2	2V	$0.45	$0.35
090GW6	6V	0.45	0.35
090GW12	12V	0.55	0.45
090GWCR	Red Cap	0.17	0.10

LED INDICATORS

Easy panel mount.

Part No.	Description	Hole Size	1-9	10+
08R735XR	T-1 3/4 LED, Red	.32"	$0.55	$0.50
08R735XG	T-1 3/4, LED, Green	.32"	0.60	0.55

LED TESTER

- LED Tester (pocket size) provides a quick way to check color, brightness and uniformity
- Provides 2, 5, 10, 20, 30, 50 mA drive current with a push of a button
- 7 middle positions set at 10mA allows comparison of several LEDs
- Requires 9V battery *(not included)*

Part No. 08LEDTST • Price:$7.95

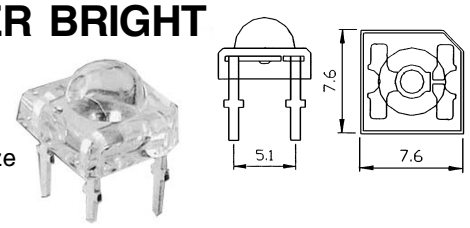
LEDS SUPER BRIGHT

8MM

- Without flange
- Copper lead frame
- Water clear lense
- Viewing angle 55

Part No.	Color	λp	Voltage Drop VF	Luminous Intensity mcd @ 100mA	1-9	10+
088R4D	Red	625	2.2V	8,500	$0.80	$0.65
088Y4D	Yellow	585	2.2V	9,500	0.80	0.65
088G4D	Green	530	3.4V	19,000	1.70	1.50
088B4D	Blue	468	3.4V	11,000	1.70	1.50
088W4D	White	–	3.4V	16,000	1.70	1.50

LEDS SUPER BRIGHT



- Super flux
- 7.6mm x 7.6mm size
- Water clear lense
- Viewing angle 120

Part No.	Color	λp nm	Luminous Intensity @ 80mA mcd		Typ. Voltage Drop	1-9	10+
			Typ	Max.			
08L1860URC	Red	622	2200	3,500	2.2V	$0.40	$0.30
08ZXRF5	Red	622	4,000	6,000	2.2V	0.80	0.65
08ZXYF5	Yellow	590	4,000	6,000	2.2V	0.80	0.65
08ZXGF5	Green	528	9,000	10,000	3.3V	1.70	1.50
08ZXBF5	Blue	468	4,000	6,000	3.3V	1.70	1.50
08ZXWF5	White	–	7,000	8,000	3.3V	1.70	1.50

LED MOUNTING CLIPS

Ring/Clip set for 5mm dia. T 1 & 3/4 frame LEDS.

Part No.	1-9	10-99	100+
08AC200	$0.12	$0.07	$0.04

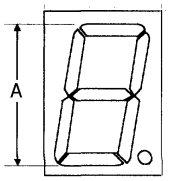
LED PROTOTYPING KIT

LED Designer Kit contains LEDs 5 each of all colors of 08L533, 08L32, 08L1043, 08L803, 08L93SRC, 08L56BID (red only). This includes super-bright LEDs and Blinking LEDs. Total of 75 LEDs.

DELUXE KIT: All of the above kit plus: 5 ea. of all colors 5V and 12V LEDs, 2 ea. of all colors LED bar graph LEDs. Total of 105 pcs.

Part No.	Description	Price
3200LPK	Regular LED Kit	$12.95
3200LPKD	Deluxe LED Kit	19.00

JUMBO 2", 4", 5", 7" 7 SEGMENT DISPLAY



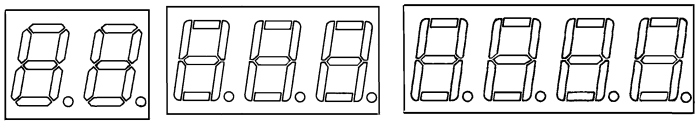
- Common anode
- Gray face with white segment
- Lights up red
- Total of 10 pins

Part No.	Description	1-9	10+
08LSD23265	2.3" Ht.	$4.50	$3.95
08LSD40165-20	4" Ht	9.50	8.95
08LSD50066-20	5" Ht	13.95	12.95
08LSD70011-20	7" Ht.	17.95	16.95

MULTI DIGIT DISPLAYS

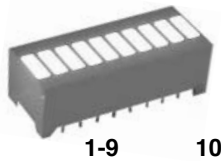
7 SEGMENT / RED COLOR

0.56" SIZE



Part No.	Description	1-9	10+
08TIE525	C.C.; 2 Digit; 18 Pin	$0.95	$0.85
08TIE524	C.A.; 2 Digit; 18 Pin	0.90	0.80
08FYT5631B	C.A.; 3 Digit; 12 Pin	1.20	1.05
08FYT5631D	C.A.; 3 Digit; 28 Pin	1.20	1.05
08FYT5631I	C.C.; 3 Digit; 28 Pin	1.75	1.50
08FYT5641B	C.A.; 4 Digit; 12 Pin	1.95	1.70

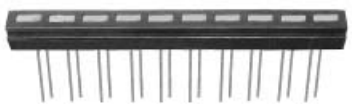
LED BAR GRAPH



10 large easily defined segments.
Dual in line with 0.1" pin spacing.

Part No.	Color	1-9	10+
08DC10IDA	Red	$1.10	$0.90
08DC10HDA	Bright Red	1.20	1.10
08DC10GDA	Green	2.00	1.70
08DC10YDA	Yellow	2.00	1.50
08DC10ODA	Orange	1.50	1.25
08DC10MDA	Multi-Color 4-Red, 3-Yellow, 3-Green	2.20	1.70

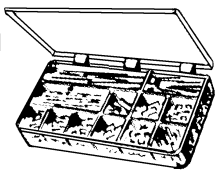
LED ARRAY



- 10 Red LEDs
- 20 Leads

Part No. 08LA10R • Price: $1.95

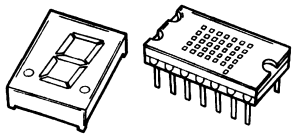
7 SEGMENT DISPLAY KIT



Display designer's kit includes 4 ea. CA and CC 0.3" 7 segment displays in red, green and yellow colors, 2 ea. of 0.5" red displays in CA and CC, 2 ea. of dual digit red CA and CC, 1 ea. of 0.8" red alphanumeric CA and CC display. Total of 34 displays.

Part No. 3200DSSK • Price: $27.50

7 SEGMENT LED DISPLAYS



Part No.	Description	Char. Height	Industry Equal	1-9	10+
08MAN72	C.A Red	0.3"	MAN 72	$0.75	$0.70
08MAN74	C.C Red	0.3"	MAN 74	0.75	070
08MAN82	C.A Yellow	0.3"	MAN 82	0.80	0.70
08MAN52	C.A Green	0.3"	MAN 52	0.80	0.70
08TIE412	C.A. Red	0.43"	5082-7750	0.80	0.70
08TIE413	C.C. Red	0.43"	5082-7760	0.80	0.70
08FND500	C.C Red	0.56"	MAN6780	0.95	0.85
08FND507	C.A Red	0.56"	MAN6760	0.95	0.85
08FNDGRAN	C.A. Green	0.5"	—	0.95	0.90
08FNDGRCC	C.C. Green	0.5"	—	0.95	0.90
08LTS3401	C.A Red	0.8"	HP3401	0.90	0.80
08TIL305	Alpha Num.	0.3"	TIL305	9.95	9.50
08TIL311	4x7 Matrix w/logic Red	0.3"	TIL 311	16.50	14.00

BLUE 7 SEGMENT LED DISPLAYS

0.3" TO 2" HIGH

Fig. A

Fig. B

Part No.	Pin Out* Industry EqualHt.	Char. Descr.		Fig.	Price
08BL72	Man72 or TIL312	0.3"	C.A. Blue	A	$3.50
08B507	FND507	0.56"	C.A. Blue	A	3.50
08B524	TIE524	0.56"	C.A. Blue	B	6.50
08B23011	—	2.0"	C.A. Blue	A	16.95

- These are blue LEDs with same pinout as certain ***red*** popular industry equals

LED DISPLAY

ALPHANUMERIC

0.5" TO 1.5" HEIGHT

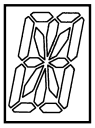


Fig. A

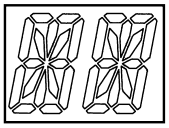
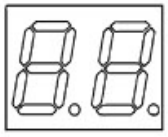


Fig. B

Part No.	Description	Fig.	Char. Ht	1-9	10+
08FY5013BD	Common Anode Red	A	0.5"	$1.45	$1.15
08FY8013BD	Common Anode Red	A	0.8"	1.95	1.65
08FY15012BD	Common Anode Red	A	1.5"	1.90	1.70
08FY8013AD	Common Cathode Red	A	0.8"	1.95	1.65
08FYD5421AS	Common Cathode, Red Dual Digit	B	0.5"	2.25	1.95

LITE ON DUAL 7 SEG. DISPLAY GREEN



- 0.4", CA Dual Display
- Mounted on spacer

Part No.	1-9	10-99	100+
08LTD4608HG	$0.40	0.35	0.30

LEDs / PHOTOCELLS

PHOTO CELLS / PHOTO CONDUCTIVE

- Quick response time / epoxy encapsulated
- High sensitivity / reliable performance
- Cadmium sulfide (cds) contruction
- Operating temp.: –30 C to +70 C
- Vmax = 100VDC
- Spectral peak: 550nm / Vmax = 150VDC

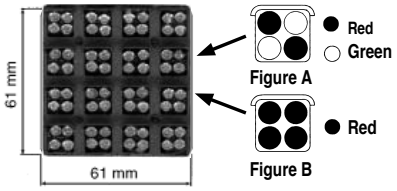
Part No.	Size Dim.A	Pmax (Min)	Light Resistance (10LUX)	Dark Resistance	1-9	10+
08GL5516	5mm	90	5K–10K	200K	$0.55	$0.45
08GL5539	5mm	150	30K–90K	5M	0.55	0.45
08GL7516	7mm	150	4K–10K	500K	0.75	0.65
08GL7539	7mm	150	50-100K	8M	0.75	0.65
08GL12528	12mm	200	8K–20K	2M	0.95	0.85

LED CLUSTERS

Part No.	Description	1-9	10+
08LCR525079	30 High Efficiency Green and 20 Super Bright Red LED's	$13.20	$11.75
08LCR2614B79	8 High Efficiency Green and 6 Super Bright Red LED's	3.95	3.65

LED CLUSTER OUTDOOR

- Each cluster has 16 segments.
- Each segment has 4 LEDs – 2 red and 2 green or 4 LEDs red (high intensity).
- Total of 64 LEDs in a cluster



Part No.	Fig.	Description	1-9	10+
08F11X16AR2G2	A	2 Red, 2 Green Per Segment	$12.00	$11.00
08F11X16AR4	B	4 Red per Segment	12.00	11.00

LED MATRIX DISPLAY

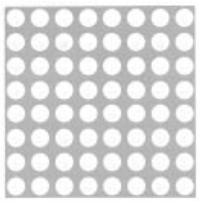
5x7 Matrix. Available in various heights.
Lights up red.

Part No.	Ht.	Description	1-9	10+
08D35EW	2"	Anode Column, Cathode Row	$1.90	$1.70
08F12571AS	1.2"	Anode Column, Cathode Row	1.85	1.65
08F12571BS	1.2"	Cathode Column, Anode Row	1.85	1.60
08TA-12-11	1"	Anode Column, Cathode Row	1.85	1.60
08TC-12-11	1"	Cathode Column, Anode Row	1.85	1.60
08LTP747C	0.7"	Anode Column, Cathode Row	2.50	2.25
08LTP757G	0.7"	Cathode Column, Anode Row (Lights Green)	1.85	1.60

BIPOLAR LED MATRIX

8 X 8 DISPLAY

- Each LED can light up green or red
- Total of 64 LEDs in a single display
- Anode – column; cathode – row



Part No.	1-9	10+
08FYM12882AEG	$4.95	$4.25

PHOTO-TRANSISTORS / DIODES

Fig. A Fig. B Fig. C Fig. D Fig. E Fig. F Fig. G Fig. H

Part No.	Fig.	Description	1-9	10+
08LT1893	A	Photo Transistor	$0.70	$0.55
08OP501SW	A	Photo Transistor	0.40	0.30
08LPT3233	B	Photo Transistor	0.45	0.40
08OP500W	C	Photo Transistor	0.40	0.30
08LPD3330	A	Photo Diode	0.75	0.65
08MRD370	D	Photo Darlington/Motorola	2.95	2.50
08L14F1	D	Photo Darlington	2.95	2.50
08L14G1	D	Photo Transistor GE	3.75	3.50
08L14G2	D	Photo Transistor GE	3.75	3.50
08TIL413	E	Photo Diode	1.20	0.90
08MRD300	D	Photo Transistor/Motorola	3.75	3.50
08MRD500	H	Photo Diode Pin	4.95	4.50
08PT9087C	F	Phototransistor	0.35	0.30
08LPT80	F	Phototransistor	0.80	0.75
08OP560	F	Photo Darlington	1.95	1.50
08OP950	F	Photo Diode	1.60	1.40
08CLD71B	G	Solar Cell	2.10	1.95

INFRARED LEDS / EMITTERS

Fig. A Fig. B Fig. C Fig. D Fig. E Fig. F

Part No.	Fig.	λp	Radiant Power (TYP)	Beam Angle	1-9	10+
08L5013IRAB	A	940	10mw	30	$0.50	$0.40
08LT383L-313	B	940	2.0mw	15	0.50	0.40
08LIR3231	C	940	2.0mw	15	0.50	0.40
08MLED71	D	940	2.5mw	30	1.45	1.35
08XC03	E	940	3.0mw	15	0.70	0.60
08LED55C	F	940	5.4mw	10	1.85	1.65
08FSD1	F	880	12mw	10	2.15	1.95

INFRARED EMITTER / DETECTOR PAIR

Matched pair

Infrared Emitter Photo Transistor

Part No.	1-9	10+
08IRTR	$0.95	$0.85

RSR LCD PANEL METER

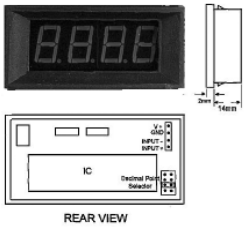
3½ DIGIT; 0.6"

Best Seller!

- Dual slope A/D conversion
- **Accuracy:** .5%
- **Sampling Time:** 2.5 sec.
- **Supply Voltage:** 8 – 12V DC
- **Size:** 68mm x 44mm
- **Input Impedance:** 100MΩ @ 200mv
  10MΩ @ 20mv
  10MΩ @ 200v

Part No.	Description	1-9	10+
01PMLCD1	0–200mv	$7.95	$7.50
01PMLCD3	0–200v	7.95	7.50
01PMLCD5	0–200V with Backlight	11.95	10.95

RSR LED PANEL METERS



- Red LED display, 5VDC operation
- Large, 0.56 inch character height
- Adjustable decimal point
- 100M input impedance, 2/5 sec sampling time
- **Dimensions:** 44mm H x 68mm W

Part No.	Description	1-9	10+
01DM3A	0-200mV	$10.95	$10.50
01DM3B	0-20V	10.95	10.50
01DM3C	0-200V	10.95	10.50

RSR LCD PANEL METERS

MODEL DV-101 – DC VOLTS
MODEL DA-103 – DC AMPS

Easy operation, professional quality, compact. Applications include education, industrial, QC and R&D, Lab.

Both Units Feature:

- LCD display, 18mm digit height
- 9V battery operation
- On/off switch
- Automatic zero adjust
- CATII 600V rating
- Approx. 0.4 sec. sampling
- Instruction Manual

Model DV101 DC Volts

- Range/Resolution:
  200mV x 0.1mV
  2V x 0.001V
  20V x 0.01V
  200V x 0.1V
- Accuracy: 200mv range (0.5% + 1 digit) reading
  2V, 20V, 200V ranges (0.8% + 1 digit) reading
- 10M input impedance

Model DA103 DC Amps

- Range/Resolution
  2mA x 0.001mA
  20mA x 0.01mA
  200mA x 0.1mA
  5A x 0.01A
- Accuracy: 2mA, 20mA, 200mA ranges (1% + 1 digit) reading
  5 amp range, (1.5% + 1 digit)
- Overload protection

Part No.	Description	1-9	10+
01DV101	DC Volt Meter	$42.50	$39.50
01DA103	DC Amp Meter	42.50	39.50

RSR LCD MODULES

- Character dot matrix
- Reflective; positive; gray
- Duty cycle 1/16; 5x7 dots
- Includes driver and controller
- **Models* with LED backlight: 08LCD7; 08LCD9; 08LCD12; 08LCD15; 08LCD18**

Part No.	Display Format	Module Size (mm)	Character Size (mm)	1-9	10+
08LCD6	16x1	80x36x9.5	6.56x3.07	$5.95	$4.50
08LCD7*	16x1	80x36x9.5	6.56x3.07	7.95	6.80
08LCD8	16x2	80x36x9.5	4.35x2.95	7.95	6.95
08LCD50**	16x2	80x36x9.5	4.35x2.95	8.50	7.50
08LCD9*	16x2	80x36x9.5	4.35x2.95	8.95	6.95
08LCD51***	16x2	80x36x9.5	4.35x2.95	9.50	7.95
08LCD11	20x2	116x37x9.5	5.55x3.2	9.95	8.50
08LCD12*	20x2	146x43x9.5	4.84x9.22	15.50	13.50
08LCD14	20x4	98x60x9.5	2.95x4.75	15.95	14.95
08LCD15*	20x4	98x60x9.5	2.95x4.75	19.95	17.50
08LCD17	40x2	182x33.5x11	3.20x8.20	15.95	13.95
08LCD18*	40x2	182x33.5x11	3.20x8.20	19.50	17.00

* Displays with LED backlight
**08LCD50 Comes with header pins
***08LC51 Comes with LED backlight + header pins

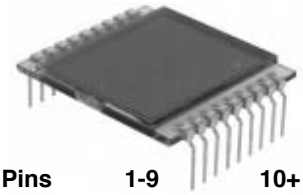
LCD DISPLAY

- Parallel character 16 x 2
- STN positive, gray, reflective
- 8 bit or 4 bit parallel interface

Part No. 08LCD30 • Price $8.95

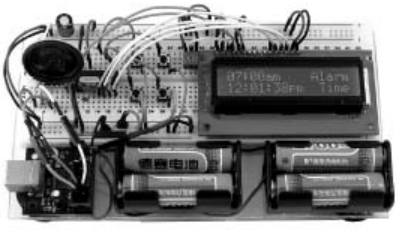
LCD DISPLAY

Digit Size: 0.5"; DIP 0.1" Type
Driver IC: CD4543 or ICL7106CPL or 74C945



Part No.	No of Digits	No of Pins	1-9	10+
08LCD1	2	18	$3.95	$ 3.50
08LCD3	4	40	6.35	6.00
08LCD4	6	50	11.95	11.50
08LCD5	6	18 *(Multiplexed)*	7.90	7.50

LCD TRAINER KIT



Liquid crystal displays are used in everything from mobile phones and TV's to robots. This trainer kit gives students hands on experience. A high quality instruction manual with step by step colour photos teaches students how to connect a common LCD to a processor and program it using free software from the internet. The basic kit comes with everything required for students to display messages, detect objects and build a working alarm clock.

Part No. 3200LCDTKIT • Price: $58.95

OPTO COUPLERS / LAMPS

INDICATOR LAMPS – W / LEADS

Lead length 6", various voltages; plastic colored lens caps (*opt.*).

Part No.	Descr.	1-9	10+
090GW2	2V	$0.45	$0.35
090GW6	6V	0.45	0.35
090GW12	12V	0.55	0.45
090GWCR	Red Cap	0.17	0.10

OPTO COUPLERS

Part No.	Description	1-9	10+
08 4N25	Infrared diode to Photo-Transistor	$0.55	$0.40
08 4N26	Infrared diode to Photo-Transistor	0.50	0.40
08 4N27	Infrared diode to Photo-Transistor	0.70	0.60
08 4N28	Infrared diode to Photo-Transistor	0.50	0.40
08 4N29	Infrared diode to Photo-Darlington	0.70	0.60
08 4N33	Infrared diode to Photo-Darlington	0.85	0.75
08 4N35	Infrared diode to Photo-Transistor	0.70	0.60
08 H11A1	Infrared diode to Photo-Transistor	1.40	1.20
08 H11C2	Infrared diode to SCR output	0.70	0.60
08 H21A1	Interrupter Module Photo-transistor output	1.05	0.95
08 H22A1	Interrupter Module Photo-transistor output	1.20	1.00
08 MCT2	Infrared diode to Photo-Transistor	0.65	0.55
08 MOC3010	Infrared diode To Triac	0.80	0.70
08 MOC3011	Infrared diode to Triac	0.69	0.59
08 MOC3020	Infrared diode to Triac	0.69	0.59
08 MOC3021	Infrared diode to Triac	0.69	0.59
08 MOC3022	Infrared diode to Triac	0.69	0.59
08 MOC3030	Infrared diode to Zero Crossing Triac	1.85	1.65
08 MOC3031	Infrared diode to Zero Crossing Triac	2.25	2.05
08 MOC3032	Infrared diode to Zero Crossing Triac	1.85	1.75
08 MOC3042	Infrared diode to Zero Crossing Triac	1.85	1.75
08 PS2501-4	Infrared diode to Photo-Trans. (Quad)	1.90	1.75

OPTICAL ENCODER WHEEL

- Ideally suited to measure rotating shaft speed, acceleration
- Disk has 8 equally spaced holes
- Disk dia. 0.72" (18mm)
- Will accept shafts of .08" to 0.11" dia.

Will accept shafts of .08" to 0.11" dia.

Part No.	1-9	10+
08DISK	$1.10	$0.90

INCANDESCENT LAMPS

Fig. G

Fig. A Fig. B Fig.C Fig.D Fig. E Fig.F

Part No.	Description	Fig.	Volts	Amps	1-9	10+
090 49	Bayonet	A	2.0	.06	$0.40	$0.35
090 45	Bayonet	A	3.2	.35	0.35	0.30
090 47	Bayonet	A	6.3	.15	0.35	0.30
090 1488	Bayonet	A	14	.15	0.40	0.35
090 1815	Bayonet	A	14	.20	0.40	0.35
090 1829	Bayonet	A	28	.07	0.40	0.35
090 1891	Bayonet	A	14	.24	0.55	0.50
090 1892	Bayonet	A	14	.12	0.60	0.55
090 1893	Bayonet	A	14	.33	0.55	0.50
090 313	Bayonet	A	28	.17	0.40	0.35
090 2200	Wire Lead	B	5	.06	0.40	0.35
090 1730	Wire Lead	B	6.0	.03	0.40	0.35
090 2112	Wire Lead	B	6.3	.20	0.40	0.35
090 1869	Wire Lead	B	10	.014	0.55	0.45
090 2174	Wire Lead	B	12	.04	0.40	0.35
090 2182	Wire Lead	B	14	.18	0.40	0.35
090 7328	Bi-Pin	C	6	.20	1.00	0.90
090 7371	Bi-Pin	C	12	.04	1.00	0.90
090 7373	Bi-Pin	C	14.0	.10	1.00	0.90
090 7377	Bi-Pin	C	6.3	.075	1.00	0.90
090 7381	Bi-Pin	C	6.3	.20	1.00	0.90
090 7382	Bi-Pin	C	14	.08	1.00	0.90
090 7387	Bi-Pin	C	28	.04	1.00	0.90
090 342	Midget Screw	E	6	.04	0.55	0.50
090 86	Wedge Base	F	6	.20	0.45	0.40
090 53	Round Bayonet	-	14	.12	0.35	0.30
090 327	Midget Flanged	-	28	.04	0.50	0.45
090 656	Wedge Base	F	28	.06	0.40	0.35
090 6S6	Bayonet Large	-	120	.05	1.15	0.95
090 NE2	Neon Lamp	G	65AC	-	0.20	0.16
091 B	Bayonet Socket	D	-	-	0.50	0.40

FLASH TUBES

Figure A

Figure B

Part No	Fig.	Description	Price
09FT0	A	Anode Voltage 360 4KV Trigger Voltage 3,000 Life Flashes	$5.50
09FT1	B	Anode Voltage 300 6KV Trigger Voltage 10,000 Life Flashes	6.25
09FT4	B	Anode Voltage 300 4KV Trigger Voltage 1,000,000 Life Flashes	7.95

TRIGGER TRANSFORMERS

300V INPUT, 4KV OUTPUT

Fig.A

Fig. B

Part No	Figure	Price
16TRIG1	A	$3.75

FIBER OPTIC DEVICES

Connectors are already molded onto these devices.

Part No.	Description	1-9	10-99
08MFOD71	Pin Diode- Output	$3.25	$2.95
08MFOD72	Transistor Detector Output	3.50	2.95
08MFOD73	Darlington Detector Output	4.50	3.95
08IFD95	Photologic Detector Output	4.50	3.95
08MFOE71	LED – Infrared Emitter (lp = 940nm)	3.50	3.25
08IFE91D	Emitter Infrared – 100 Mbps (870nm)	3.50	3.20
08IFE92A	Emitter – Blue – (λp = 430 nm)	9.50	8.75
08IFE92B	Emitter – Blue – (λp = 470nm)	9.50	8.75
08IFE93	LED – Green LED Emitter	8.00	7.50
08IFE96	LED – Red LED Emitter (lp = 660nm)	3.50	3.20
08IFD96	Detector – 5MHz Photo Logic	6.50	6.25
08IFE97	Emitter – Super Bright LED – 1Mbps	4.50	4.00
08IFD97	Detector – 50 Mbps Photologic Detector	12.50	11.50
08IFE98	Emitter – Super Bright LED – 50Mbps	9.50	9.00
08IFD98	Detector – 155 Mbps Photologic	18.50	17.50

FIBER OPTIC CONNECTORS

Fig. A

Fig. B

Part No.	Fig.	Industry Equal	Description	1-9	10+
2400228040-1	A	228040-1	Active Device Mount TO-92	$2.50	$2.25
2400228043-1	A	228043-1	Active Device "Sweet Spot" TO-92	2.50	2.25
2400228087-1	B	338087-1	Single Position Plug Assembly	2.50	2.25
2400228709-1	A	228709-1	Active Device Mount for Mot. Device	2.50	2.25

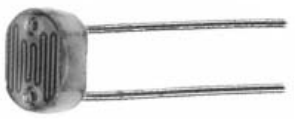
FIBER OPTIC CABLE

- Plastic m core
- Typical attenuation .2db/meter (@650nm)

Part No.	Description	1-9	10+
2705FBS1M	Simplex Plastic 1 Meter	$0.75	$0.60
2705FBS10M	Simplex Plastic 10 Meter	6.25	5.50
2705FBS100M	Simplex plastic 100 Meter Spool	50.00	45.00
2705FBS500M	Simplex Plastic 500 Meter Spool	185.00	165.00
2705FIBOPT-D	Duplex Plastic Per Foot	0.80/ft	0.70/ft.

PHOTO CELL

Light dependent Resistor. Cadmium Sulfide type. Changes resistance with light.



Part No.	Max. Dark Resistance	Resistance @ 2 ft. Candle	1-9	10+
08VT5K	500K ohm	5K ohm	0.75	0.65

PHOTO CELLS / PHOTO CONDUCTIVE

- Quick response time / epoxy encapsulated
- High sensitivity / reliable performance
- Cadmium sulfide (cds) contruction
- Operating temp.: –30 C to +70 C
- Vmax = 100VDC
- Spectral peak: 550nm / Vmax = 150VDC

Part No.	Size Dim.A	Pmax (Min)	Light Resistance (10LUX)	Dark Resistance	1-9	10+
08GL5516	5mm	90	5K–10K	200K	$0.55	$0.45
08GL5539	5mm	150	30K–90K	5M	0.55	0.45
08GL7516	7mm	150	4K–10K	500K	0.75	0.65
08GL7539	7mm	150	50-100K	8M	0.75	0.65
08GL12528	12mm	200	8K–20K	2M	0.95	0.85

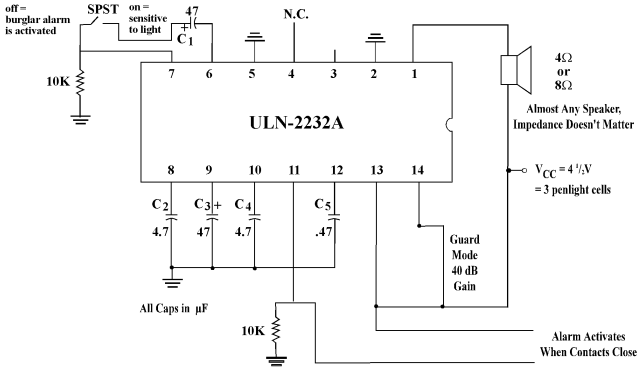
MOTION DETECTOR MODULES AND/OR IC'S WITH DATA SHEET

Low Voltage Operation with built in alarm mode. Detects changes in ambient light. Features ULN-2232 IC.

Part No.	Description	1-9	10-49	50+
08MODETECT	Modules (Includes IC and Optical Lens Mounted on PC Board W/Capacitors	$2.00	$1.70	$1.50
08ULN2232	IC and Optical Lens Only	1.00	.85	.75

OPTIONS:

Part No.	Description	Price
26SP08	Speaker For Motion Detector	$0.95
061137	Project Box and Lid	3.95
2800RG9	9V Battery	1.30
2801BSI	Battery Snap	.25



FIBER OPTIC SPLICING & CONNECTOR MODULE

The Fiber Optic Connector and Splicing Module is an ideal hands-on training curriculum for industrial technology and vocational education studies in two of the most sought after industry technical skills todaysplicing a fiber optic cable and doing field installations of fiber optic connectors.

Features
- Comprehensive and challenging activities
- Complete self-contained curriculum
- Color-coded activity tabs
- Low cost per student
- Uses safe, large-core plastic fiber
- Full 4-color instructor and student manuals
- Step by step instructions
- Many graphic illustrations add clarity to instructions
- Removable and photocopyable sheets in the Instructor's Manual
- Stand-alone curriculum capability

The Fiber Optic Connector and Splicing Module is a 3-activity module with the following activities:

- Equipment and Component Familiarization
- Methods for Installing a Fiber Connector
- Methods for Splicing Fiber Cable

Each activity includes:

- Advance reading assignments
- Actual hands-on, step-by-step procedures for assembling components, then testing them for degree of technical performance. Discussions of applicability to real-world environments such as communications systems put the procedures in industry perspective.
- Assessment of the strengths and shortcomings of various components as system requirements change.
- Worksheets/quizzes that test students' knowledge as well as their ability to apply that knowledge to conceptual situations.
- Homework assignments (using Internet or library resources)

The comprehensive Instructor's Manual that comes with the module also includes answers to quiz and worksheet questions and a description of replacement parts, which are consumed or worn down in activities.

(The Fiber Optic Connector and Splicing Module includes the following items: fiber inspection microscope, hot knife and stand, fiber optic crimping tool, Professional fiber cutter, titanium polishing puck, polishing slurry, Micro-strip fiber stripper, glass polishing plate, tool box, 2 ounces index-matching gel, 2000 grit sandpaper, 3 µm polishing film, 2 ST® mating sleeves, set of two interconnecting fibers, 4 ounces isopropyl alcohol, 2 Student manuals, 1 Instructor¹s manual, 15 2-meter lengths of 1000 µm-core plastic fiber, 15 fiber splices and 30 ST® fiber connectors.)

Part No.	Description	Price
08IF505	Complete Splicing & Connector Module Including All Components	$585.00
08IF528	Consumable Kit	195.00

FIBER OPTIC COMMUNICATIONS & NETWORKING MODULE

The Fiber Optic Communications & Networking Module is a 10-activity, intermediate-level product developed for teaching fiber optic communications and networking technology. The curriculum addresses the most recent advances in the rapidly changing fiber communications and networking technology fields.

Curriculum subjects include:

- Fundamentals of fiber optic technology
- Optical fiber manufacture
- Optical fiber construction: single- and multi-mode
- Dispersion and attenuation
- Fiber cable comparisons
- Generation III fiber connection technology
- Fusion splicing techniques
- Fiber couplers and optical power splitters
- Wavelength division multiplexing
- Fiber optic tools, testing and test equipment

The module curriculum guide is a comprehensive manual comprising 10 exciting activities, with technical reading assignments for each. Accompanying Fiber Optic Reference Guides contain 14 chapters with several hundred illustrations in 199 pages. An extensive list of references and a working glossary of fiber optic terms are included.

Hands-on experiments and networking activities include:

- Color picture and sound signals over fiber
- Optical fiber characterization
- Losses in optical fiber
- Fiber optic switching networks
- Optical and electrical multiplexing
- Fiber termination polishing and splicing
- Infrared light conversion
- Use of fiber optic couplers (splitters)

FEATURES
- Versatile curriculum format (metric and SAE dimensions)
- 10 comprehensive and challenging activities
- Full-color student and instructor manuals
- Completely self-contained curriculum
- Curriculum pretest and post test
- Instructor's manual with color-coded answer sheets
- Solid-state, low profile, surface-mount transceivers with audio and video transmission capabilities
- Low-voltage transceiver operation with optical detection
- Multiplexed switching input/output transceiver
- Low-power LED technology for safety
- 3 transmit wavelength operation

(The Communications and Networking Module shown above comes complete with three fiber optic wide-bandwidth video transceivers, 110 VAC- to-12 VDC power adapters, 15 2-meter 1000 µm core plastic fibers, 15 fiber splices, 30 ST® fiber connectors, crimping tool for splices and connectors, 40 µm and 3 mm polishing film, optical inspection scope, index-matching gel, DC motor, optical multiplexer, fiber cutter, polishing plate, polishing slurry, ST® barrel connector, 1 x 2 fiber star coupler, 1, 3, and 10- meter fiber optic cables, fiber optic multi-meter, two dynamic microphones, two AM/FM radios, scale, infrared indicator card, coax cable, hot knife and stand, Micro-strip fiber stripper, four ounces isopropyl alcohol, photonics wall chart, two Fiber Optic Reference Guides, two permanently bound student manuals and an instructor's manual in a sturdy 3-ring binder.)*

Part No.	Description	Price
08IF527	Fiber Optic Communications & Networking Module	$2,395.00
08IF120265	Student Manual	27.00
08IF120260	Teacher's Manual	38.00
08IF528	Consumables Kit – contains 15 two meter plastic fibers, 15 fiber splices, 30 ST® fiber connectors, 40 m and 3mm polishing film	195.00

RSR EXPERIMENTER'S KIT

Includes fiber optic components, cable, lab manual and experiments that can be breadboarded.

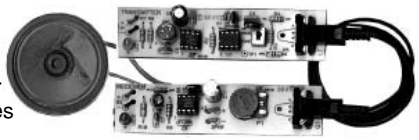
Part No. 3200OK100 • Price: $8.95

RSR COMMUNICATION KIT

Easy to assemble, digital link. This kit contains receiver and transmitter PC Boards. 555 based on board oscillator. Frequency range 100Hz to 10KHz. Includes fiber optic devices, cables and connectors.

Part No. 3200RSR721 • Price: $14.95

OPTICAL AUDIO LINK



Easy to assemble voice link. Transmitter and receiver on separate PC boards. Great for learning the basics of fiber optic communications. Includes fiber optic devices, cable and connector. Requires 2 – 9V batteries *(not included)*.

Part No. 3200OK726 • Price $13.90

SCIENCE PROJECT KIT

Learn fiber optics by experimenting and building projects with no prior experience needed. The practical 224-page text has theory, 8 experiments and 5 projects. After completion of this kit several useful projects will have been constructed, such as an analog voice link, and a light pen.

Part No. 3200FBIFE33 • Price: $46.00

FIBER OPTIC CLASSROOM AND LAB COURSE

This is a 10-to-15 week course put together to fill the needs of vocational schools and universities in fiber optics. Basic understanding of electronics and mathematics is suggested. Course includes a text for classroom or lecture, lab manual for student experiments, and lab kit with all required components.

Part No.	Prices
32FBSC11	$95.00
32FBSC11-IN (Instructor's Edition)	135.00

FIBER OPTIC MINI COURSE

This course is a package that can be integrated into any electronics class. Beginning with history through system design and applications. Covers industrial and communication applications. The "Instructor's Edition" contains an additional reference book, answer guide, overhead transparencies, 10 demo pieces and the regular curriculum.

Part No.	Description	Prices
32FBMC10	Fiber Optic Mini Course	$36.95

FIBER OPTIC CABLE

- Plastic m core
- Typical attenuation .2db/meter (@650nm)

Part No.	Description	1-9	10+
2705FBS1M	Simplex Plastic 1 Meter	$0.75	$0.60
2705FBS10M	Simplex Plastic 10 Meter	6.25	5.50
2705FBS100M	Simplex plastic 100 Meter Spool	50.00	45.00
2705FBS500M	Simplex Plastic 500 Meter Spool	185.00	165.00
2705FIBOPT-D	Duplex Plastic Per Foot	0.80/ft	0.70/ft.

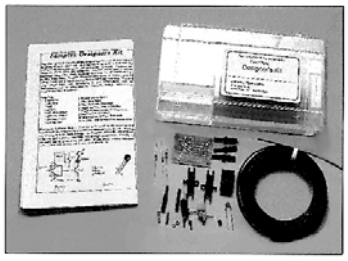
FIBER OPTIC LAB MANUAL AND LAB KIT

Features: 7 Experiments, Final Design Project, Glossary, Research Projects. Lab Manual is a complete 60 page technical manual, written in an easy to understand style. It contains 7 ready to use experiments – Making a Light Pipe; Fiber Cable Transmission; Splices; Connectors and Terminations; Speed of Opto-Electronic Devices; Fiber Optic Transmitters; Fiber Optic Receivers; Star Coupler; Final-Design Project.

Part No.	Description	Prices
32FBLM	Lab Manual only	$14.90
32FBLMKIT	Lab Manual w/ Kit	43.95
32IFMLA	Answer Guide	7.95

DESIGNER KITS

MODEL IF-SD11 (SIMPLEX KIT)
MODEL IF-DD11 (DUPLEX KIT)



"Creative-friendly" kits for technicians, experimenters, scientists and enterprising students who require prototypes or special-purpose interfaces requiring fiber optics capabilities. This very low-cost "active link" requires a single +5 volt supply and interfaces with all TTL/CMOS logic. It includes 10 meters of 1000 m optical cable; efficient dry, non-polish connectors, bulkhead interfaces, and splices; integrated detector(s) and emitter(s); and top-quality printed wiring boards. Full instructions and technical data sheets complete the package.

Part No.	Description	Price
3200FBSD11	Simplex Kit (Single Channel)	$66.00
3200FBDD11	Duplex Kit (Bi-directional)	125.00

FIBER OPTIC SPLICE KIT

A complete package for extending or mending the jacket 1000 m plastic fiber. Kit contains all retention clips, fiber sleeves, and assembly instructions to complete ten splices. No polishing, adhesives, or special tools required.

Part No. 06FBCS10 • Price: $9.25

FIBER OPTIC TOOL KIT

This kit includes all the tools needed to work with all plastic optical fibers and termination types:

- Jacketed and unjacketed, diameters ranging from .25 to 3 mm, single strands or multi-fiber bundles
- Polishing, simple cutting or hot knife terminations
- Connector-less or connectorized

Kit contains fiber optic stripper, hot knife, universal fiber cutter, water dispenser, rubber pad, 600 grit and 3 m polishing film, replacement blades, ST fiber polishing puck, rugged storage container and instruction sheet.

Part No. 06FBIFTK4 • Price: $125.00

FIBER OPTIC DEMONSTRATION SYSTEM

The Fiber Optic Demonstration System is a state-of-the-art fiber optic technology module. This tried and proven academic module comes complete and ready to use. This curriculum recently has been revised and rewritten to include the latest in the rapidly changing fiber technology field. Additions to the curriculum include:

- Fusion splicing techniques
- Fiber connector technology
- Optical power splitters
- Wavelength division multiplexing
- Fiber termination tools and procedures
- Fiber optic testing and test equipment

The curriculum manual is precisely formatted into 10 independent activities in 144 pages with more than 60 real-owrld illustrations and industry photos. An extensive list of references and a working glossary of fiber optic terms is included. Each activity includes:

- Historical and technical reading assignments
- Hands-on working experience and experiments with fiber optics and associated components
- Problem solving and student worksheets
- Team activities
- Homework and investigative research
- Web fiber optic tours and projects

Hands-on activities immerse students in the technological aspects of:

- Voice transmission over fiber
- Analog and digital data transmission
- Morse Code over fiber optics
- Optical fiber characterization
- Fiber sensors and applications
- Bending losses in optical fibers
- Optical fiber termination and polishing
- Attenuation in optical fiber

Part No.	Description	Price
32IFDS100G	Demonstration System Glass Version	$850.00
32IFDS100C	Student Manual	29.00

OPTICAL VOICE LINK

MODEL IF-OVL-K (KIT)
MODEL IF-OVL-A (ASSEMBLED)

For students and experimenters alike, the Optical Voice Link is the ideal introduction for those first learning about the marvels, mysteries, and science of light transmission through optical fiber. There is something fascinating, indeed, about hearing your own voice, after it has been converted into light and then coupled into, through and out of an optical fiber.

The Optic Voice Link is designed to meet a wide variety of educational, commercial, and industrial applications, including:

- Science projects
- Home projects for hobbyists
- Short, audio fiber optic curriculums for schools
- Inexpensive classroom demonstrations
- Hands-on practical industrial training
- Voice transmission in critical electrical isolation applications

The Optical Voice Link can be extended up to 60 meters.
Kit includes: printed wiring boards, switches, electronics, microphone, 8 ohm speaker, three meters of plastic fiber cable, an uncomplicated tutorial, and step-by-step assembly instructions. No prior fiber optics experience, special tools or training are needed to build, use and enjoy the multiple applications of this kit. Some experience with soldering is recommended for completion of the unassembled version.

PART NO.	DESCRIPTION	PRICE
32IFOVLK	Kit	$49.95
32IFOVLA	Assembled	85.00

ADVENTURES IN FIBER OPTICS KIT

Introductory fiber optic technology kit. Contains 5 unique projects:

- Image Magnifier
- Lighted Constellation Map
- Fiber Optic Wand
- Fluorescent Holiday Wreath

Features 20 different experiments including:

- Bending a light guide
- Fluorescence
- Tyndall's Prestigious Experiment
- Special Fiber Optic Lighting
- Art of Polishing Glass
- Making Your Own Image Conduit.

Kit comes complete with penlight, rubber light hood, 6 different optical fiber types, Ulexite fiber optic rock, 3 coherent fiber optic components, color filters, lens, star/constellation map, polishing film and other miscellaneous components

Part No. 32IFE60 • Price: $36.00

FIBER OPTIC KIT

ANALOG AND DIGITAL COMMUNICATION KIT

An ideal kit for high school and technical instructors who require the ability to demonstrate analog and digital fiber optics communications principles with a single, economical product. When assembled, the kit provided a unique arrangement of dual-purpose analog and digital transmitter and receiver modules. The transmitter is a user-selectable design with an on-board microphone for an audio analog signal source and a built-in 15 Hz oscillator for digital signals. it also has input connections for external analog and CMOS-compatible signals. Unlike other fiber optic kits, this one requires no oscilloscope and is powered by two 9-volt batters *(not included)*.

Part No. 3200IF545 • Price: $54.95

UNJACKETED FIBER

This versatile fiber is particularly suited to simple illumination and demonstration applications such as illuminated maps, lights for model railroads / airplanes, Christmas tree lighting and embroidering into fabric. It is PMMA material, attenuation <400 dB/km @ 660 nm, numerical aperture 0.65. Available in custom lengths or by the spool. ***Must purchase minimum 10' length.***

Part No	Diameter (μm)	Price
32IFCU250	250	$0.25 / Ft.
32IFCU500	500	0.25 / Ft.
32IFCU1000	1000	0.30 / Ft.
32IFCU2000	2000	2.50 / Ft.

UNIVERSAL MICROSCOPE FOR FIBER CABLE

Provided with an ST, SC and FC universal faceplate. Insert ferrule into the microscope and inspect the end surface. This 100X microscope is perfect for multimode connectors.

Part No. 08FI9786 • Price: $69.00

FIBER CONTINUITY TESTER

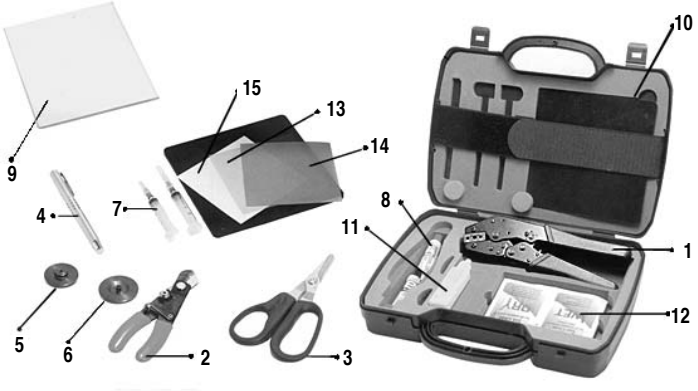
Universal Tester (ST, SC and FC) connect your ST, SC, FC connector to the adapter and push on/off button. The red LED light is transmitted down the fiber, providing easy identification at the other end.

Part No. 01FBLP • Price $39.50

RSR

FIBER OPTIC TOOL KIT

GREAT VALUE
$135.00 (10+)



Kit Contents:

1. Fiber optic crimp tool
2. Precision stripper
3. Kevlar cutter
4. Carbide scribe
5. ST polish disc
6. SC polish disc
7. Epoxy application syringe 2 pieces
8. Two part epoxy for connectarization
9. Glass working pad 6" x 8"
10. Rubber working pad 6" x 6"
11. Cleanser
12. Fiber optic wipes (wet and dry)
13. 6 m brown diamond polish film 4" x 4"
14. 1 m purple diamond polish film 4" x 4"
15. 0.05 m white alum. oxide polish film 4" x 4"

Includes most commonly used tools in crimping SC, ST type connectors to glass fiber optics cable.

Part No.	1-9	10+
3200FOPTK	$140.00	$135.00

FIBER OPTIC CABLE

GLASS / SIMPLEX

Standard 62.5/120 m multimode (MM), simplex glass fiber cable. Orange color outer jacket with 2.9mm diameter.

Part No. 2705FOPG1 • Price: $0.40/meter

ST/SC CONNECTORS

ST Style

These connectors for glass fiber come with a 2.5mm ferrule. Available for multimode cable, these connectors feature reliable, durable field installation.

- Zirconia ferrule
- Fiber size 125 m (multimode)

Part No.	Style	Price
08FI0066	ST	$2.45
08FI3066	SC	3.25

EXTECH INSTRUMENTS

FIBER OPTIC POWER METER

- Simple optical power and loss measurements
- 55db dynamic range
- Single pushbutton zero reference
- 2.5mm universal adapter (ST, SC and FC)

Part No	Description	Price
01PM100-S	Meter with Si Detector	$177.00
01PM100-G	Meter with Ge Detector	299.99

FIBER OPTIC TEST SET

A versatile and rugged fiber optic test instrument specifically designed for use with plastic optical fiber. It features capabilities for

- Performing fiber continuity checks
- Measuring fiber output power
- Calibrating and screening detectors
- Measuring LED power
- Measuring fiber attenuation

The Fiber Optic Test Set uses a silicon photodetector to measure optical power which is calibrated at the two most commonly used wavelengths in plastic fiber — 660 (red) and 850 (infrared) nanometers. Optical power displayed in easy-to-read 3½ LCD display which can be set in four different power ranges.

The detector and LED are both housed in industry-standard ST female input connectors. The connectors permit measurements with any plastic fiber in an ST male connector or connector-less fiber with an outer diameter of 2.5 mm or less.

Part No. 01IFFOM • Price: $245.00

DIGITAL PHOTOMETER

OPTICAL POWER METER

MODEL IF-PM

A versatile and economical classroom tool for measuring power levels of laser beams, demodulating optical signals for audio applications and solar experiments. Photometers are essential equipment in any principles-of-technology or in-school research program. The battery power and portability of this model offer particular flexibility.

The photometer is powered by two standard 9-volt batteries and offers 4 digital measurements scales from 20 microwatts through 20 milliwatts. It demodulates optical signals up to 10 kHz and provides a DC analog output through standard banana jacks. (The analog output can be connected to a strip chart recorder for solar monitoring or to an oscilloscope for observing optical signals. The photometer will also act as an audio receiver to demodulate laser signals, which are also output to the analog jacks.)

Photometer comes complete with storage container, optical stand for the detector, instruction manual and batteries.

Part No. 32IFPM • Price: $185.00

FIBER OPTIC TRAINING CDS

FIBER OPTIC TECHNOLOGY SERIES

Please see our website at http://www.elexp.com/trn_w4lk.htm for details of various titles.

CD Part No.	TITLE	Length (min.)	Price	
31W5LK	Plastic Optical Fiber	23	$99.95
31W5LP	History of Fiber Optics	35	99.95
31W5LF	Fiber Optic Applications	43	99.95
31W5LB	Introduction to Fiber Optic Theory & Fiber Structure	35	99.95
31W5LJ	Fiber Optic Safety	26	99.95
31W5LC	Fiber Optic Cable	17	99.95
31W5LG	Fiber Optic LEDs, Lasers & Detectors	37	99.95
31W5LI	Fiber Optic Installation	41	99.95
31W5LH	Fiber Optic Couplers, Switches & Isolators	30	99.95
31W5LM	Dense Wavelength Division Multiplexing	34	99.95
31W5LD	Fiber Optic Connectors, Connectorization & Patch Panels	30	99.95
31W5LN	Fiber Optic Testing, Troubleshooting & Documentation (F14650CDR)	30	99.95
31W5LR	Fiber Optic System Design	30	99.95
31W5LS	Fiber Optic Splicing & Splicing Closures (F13000CDR)	30	99.97

FIBER OPTIC DEMONSTRATOR SET

Demonstrate the basics of light transmission with two specially formulated Lucite bars — one curved and one straight. Light beams can be seen trapped and reflecting down the straight bar as well as around the bend in the curved bar. ***Laser source required to create light beams.***

Part No. 08IF547 • Price $69.00

FIBER OPTIC SPLICE/CONNECTOR

It utilizes cinch nuts, alignment principles and no-fuss fiber terminations to quickly handle the three most common requirements for joining two fiber lengths:

- Replacing damaged fiber segments.
- Combining two different fiber lengths.
- Bulkhead or patch panel connections.

The connector can be used with index-matching gel, for reducing Fresnel reflection losses, or without gel for quick and easy connections. It does not require that the jacket be stripped.

Part No.	1-9	10+
08IFCS4	$9.50	$8.95

INFRARED DETECTION CARDS

Now available are indicator cards for converting 850 nm infrared light to the visible spectrum. You will be able to visually detect the presence of infrared light when it is shined upon the active area of the card. Active area is 2.54 x 2.54 cm.

Part No.	1-9	10+
08IF850050	$19.50	$19.00

INSPECTION MICROSCOPE

Insert any 2.5 mm fiber ferrule into the microscope, turn on the light and inspect the end surface with ease. The microscope is provided with an ST®, FC and SC universal faceplate. It is perfect for all multimode plastic and glass fiber, plus it is easy to use. An exceptional value.

Part No. 08IF370050 • Price: $89.00

FIBER POLISHING KIT

Specifically formulated to ensure precise polishing of plastic fiber tips. Contains full instructions with diagrams and two sheets 10 x 14cm of 2000-grit and 3 m polishing film.

Part No. 08IFCPK • Price: $7.50

ST® POLISHING PUCK

At last! A polishing disk for terminating ST® fiber connections and one whose capabilities match the economy and utility that are available in hundreds of plastic fiber terminations. The injection molded plastic disk is tough, durable and super-low in cost, and is limited to approximately 100 polishes. The metal disk is slightly more in cost, but is also more durable and capable of performing 1000+ polishes.

Part No.	Description	Price
08IF370041	Plastic Polishing Puck	$8.50
08IF370042	Metal ST® Polishing Puck	86.00

ST® STYLE CONNECTOR

Designed specifically for the installer who demands fast and easy assembly, top optical performance and low cost. The durable connector has metal housing with hard stainless alloy ferrule and polishes quickly. The connector's rear design crimps directly on the cable jacket, eliminating cable pull-away from the connector. The ST® connector is supplied with a 3mm boot. Stainless steel ferrule, fiber size 1000 (ideal for plastic fiber), typical loss .5db

Part No. 08IFCST • Price: $4.20

FIBER OPTIC CRIMP TOOL

Fiber optic connectors call for precision crimping to attached their sleeves to the fiber cable for maximum strength. The IFO crimp tool is designed to precisely assemble our low cost ST® fiber terminations to the 2.2 mm OD jacket on standard communications plastic fiber. Tool die has four crimp slots (inches): .128 hex, .141 round, .151 hex and .190 hex.

Part No. 08IF370045 • Price: $55.00

"TRI-HOLE" FIBER OPTIC STRIPPER

- Three-hole design performs all common fiber optic stripping functions in one tool
  - — Standard 250 to 125 micron stripping
  - — Remove 900 tight buffer to 250 micron buffer coating
  - — Hole for removal of 2 to 3 mm fiber jackets
- Cutting surfaces are precision formed, hardened, tempered and ground for precise buffer removal
- Prevents scratching or nicking of optical fiber
- Coil return spring

Part No.	Price
0602FO103T250J	$26.50

FIBER OPTIC STRIPPER

Used for stripping 250 micron coating from fiber optic cable down to the 125 micron glass fiber without any nicks or scratches.

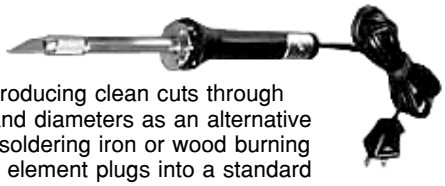
Part No. 0602JIC125 • Price: $23.75

FIBER STRIPPER NO-NICK®

The no-nick stripper is the most commonly used fiber stripper in the industry. Will not nick the fiber cladding and cause light leakage. Precision-ground blade crushes the fiber jacket for easy removal. For use with 1000 m core fiber with 2.2 mm OD jacket or smaller.

Part No. 08IF370015 • Price: $59.00

HOT KNIFE



An inexpensive tool for producing clean cuts through plastic fiber of all types and diameters as an alternative to polishing. Used like a soldering iron or wood burning tool. The 25-watt heating element plugs into a standard 110 VAC 3-prong outlet and has 4-foot cord. Replacement blades are standard X-ACTO® type.

Part No.	Description	Price
08IF370011	25W Iron	$21.95
08IF370012	60W Iron With Brass Cutting Edge	95.00

DISPOSABLE FIBER CUTTER

This versatile, inexpensive and easy-to-use fiber cutter. The cutter features aperatures for cutting fiber such as:

- 750 and 1000 m simple and duplex jacket fibers.
- 750 and 1000 m bare fibers.
- 16-fiber light guides.

A perfect tool for installations where a technician may need to make only a few terminations.

Part No.	1-9	10+
08IFFC2	$4.90	$4.40

RSR SOLAR BATTERY CHARGER W/METER AND LIGHT

- Designed with a meter lamp head, equipped with a meter together with a lamp (bulb)
- Solar battery charger is designed for charging 2 pcs “AA”, “AAA”, and “C” rechargeable batteries
- The charger is equipped with a meter with 3 unique features, (1) strength of the sunlight, (2) strength of the power output from the solar panel, and (3) how long it takes to fully charge the batteries
- Meter can register sun power up to 160mA
- Reverse blocking diode is built into the circuit

Part No.	1-9	10+
08SLC31	$18.50	$16.95

SOLAR WOODEN MODEL KITS

Part No	Description	1-9	10+
08SLC21	Gramophone with Music	$9.95	$8.95
08SLC22	Helicopter with Motor	9.95	8.95
08SLC23	Airplane with Motor	9.95	8.95

OWIKIT™ RECHARGEABLE SOLAR TRANSFORMERS 7-IN-1

Features all snap together plastic parts (no screws, tools required), solar panel and accessories. It is incredibly easy to assemble the 7 different modules: 2 power charging stations and 5 different vehicles.
The transforming rechargeable station has 2 output plugs; one for solar recharging and the other for battery recharging. Amazingly, the battery charging station can bring the selected unit to full power in about 5 seconds and the solar recharging station will fully recharge in approximately 120 seconds. The fun time - run time is approximately 50-80 seconds.

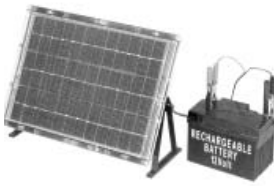
Part No. 32OWIMSK640 • Price: $28.95

OWIKIT™ SOLAR BULLET TRAIN

All Aboard the fastest train under the sun! OWI is proud to introduce their Solar Bullet Train mini solar kit. This kit entices students and train enthusiasts alike to learn about the environmental benefits of renewable energy. Two interlocking cars attach to the engine, allowing young builders to focus on self-motivation, perseverance and manipulation. The Solar Bullet Train is an excellent beginner building kit designed to teach how solar power is used to drive a small motor. Its 18 parts snap together and are secured with only four screws. Train enthusiasts of all ages will enjoy building this amazingly fast eco-friendly train and watch it travel without rails.

Part No. 32OWIMSK680 • Price: $12.50

RSR SOLAR PANEL FOR 12V RECHARGEABLE BATTERY



Built-in diode, wires with alligator clips. Panel comes with stand

- **Power (Max):** 2.88W
- **Voltage Voc:** 18V
- **Current (Max) Isc:** 160mA
- **Cell Size (mm):** 25x25
- **Cells in Series:** 36
- **Panel Size (mm):** 159x278x17
- **Weight:** 18 oz.

Part No.	1-9	10+
08SLC33	$59.90	$57.90

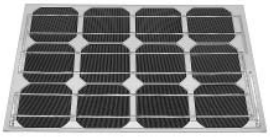
SOLAR PANEL 3, 6, 9, 12V

Provides 3, 6, 9, 12V volt solar panel output to power small devices. Includes “AA” battery charger, a pair of mini alligator clips, and a multi-connector plug. 3/16" thick.

Part No. 08SLC26 • Price $15.95

SOLAR PANEL KIT 30W

This do-it-yourself system can product 30W.



- Array of 12 (5"), 2.5W monocrystalline solar cells
- Custom-milled base panel with a protective recess for each cell
- Daisy-chain multiple units for higher voltage/current/power output
- **Kit Contents:** 13 pak of solar cells, base and cover panel, flux pen, cell tabbing wire, adhesive backed flat copper bus-bar wire, polycarbonate cement, disposable gloves
- **Dimensions:** 23.8" x 15.8" x .375" after assembly

Part No. 08PX33000 • Price: $149.00

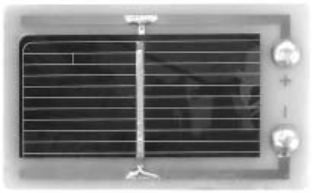
RSR SOLAR BATTERY CHARGER FOLDING PANEL 6V@200MA

- Convenient for charging appliances / mobile phone
- Includes full set of multi-plug for charging toys, radio / players etc.
- With battery compartment for charging 3 pieces of “AA” size rechargeable batteries

Part No.	1-9	10+
08SLC32	$17.50	$16.50

SOLAR PRODUCTS

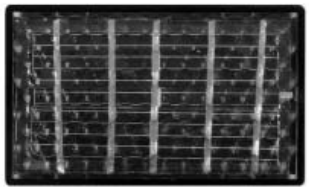
SOLAR CELLS



The solar cells are laminated with high quality resin material on the PC board with excellent moisture protection. These modules are designed for educational kits or projects. 2mm thick. **These can be connected in series or parallel to increase voltage or current output**

Part No.	Voltage (Voc)	Current Isc (typ)	Size mm	No. of Cells/ Modules	1-9	10+
08SLC02	0.5V	500mA	62x46	1	5.95	5.50
08SLC03	1.0V	250mA	62x46	2	6.95	6.50
08SLC04	1.5V	500mA	62x120	3	12.95	11.95
MINI SIZE MODULES						
08SLC07	5.0V	60mA	53x109	10	9.50	9.05
08SLC09	18.0V	120mA	138x154	36	19.95	18.95

SOLAR CELLS



Economical, encapsulated solar cell modules. **These can be easily connected in series or parallel to increase voltage or current output.**

Part No.	Voltage (Voc)	Current Isc (typ)	Size mm	1-9	10+
08SLC15	0.5V	400mA	75x45	$5.95	$5.75
08SLC16	0.5V	1,000mA	95x65	7.95	7.50

SOLAR POWER TRAINING COURSE

MODEL SO-20K

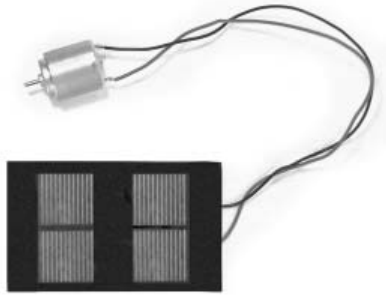
With the Solar Power Training Course you will learn how sunlight can be converted into electricity.

Some projects are:
- Make a solar circuit
- Make an electrical circuit
- Learn how to increase voltage
- Learn how to increase current
- Learn how to make a solar panel
- Use solar power to produce the energy for a radio, calculator, battery charger or 1.5V cassette player

The solar cell comes with 8 solar cells, electric motor, propeller, buzzer, light bulb, wire and hard ware. Training manual included.

Part No.	1-9	10+
08SLC27	$18.95	$17.95

SOLAR MOTOR KIT



Includes a solar cell module (1V, 400mA) plus motor and motor clip.
Size: 3.7" x 2.6"

Part No.	1-9	10+
08SLC24	$9.50	$8.95

SOLAR MOTOR

Can be easily driven by solar panel with 1.0V DC output.

Part No.	1-9	10+
08DCMOTOR	$1.50	$1.25

SOLAR TOY MOTOR

This can be easily driven by any solar panel with 1.5V DC output.

Part No.	1-9	10+
29DCM2	$0.65	$0.60

EDUCATIONAL SOLAR ENERGY KIT

Explore various hands-on activities. Includes solar panel, DC motor, plastic wheel and disk.

Part No.	1-9	10+
08SLC20	$8.95	$8.50

RSR

SOLAR EDUCATIONAL KIT

- Solar cell module, when placed under direct sunlight, generates power comparable to batteries. Discover how to harness solar energy and apply to countless practical applications.
- Students can do series of do-it-yourself experiments to acquire the basic knowledge of solar energy. They can learn how to:
  a) Make an electrical circuit.
  b) Make a solar circuit.
  c) Learn how to increase voltage.
  d) Learn how to increase current.

Part No.	1-9	10+
08SLC30	$12.95	$12.25

THERMAL FIBER OPTIC STRIPPERS

FIXED BLADE & ADJUSTABLE
MODEL TSAB-125 - FIXED BLADE
MODEL TSAB-40 - ADJ. BLADE

Thermal Stripper Fixed Blade

Thermal Stripper Adjustable Blade

Ericsson Style Holder

Fitel/Fujikara Style Holder

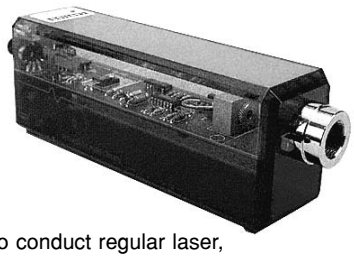
Universl Clamp

Thermo-mechanically remove coatings from optical fibers. High strength thermal strippers. Fixed blade Model TSAB-125 supports standard 125um optical fibers, 250um, 400um and 900um coated fibers. Adjustable blade version supports cladding diameters 40um to 1,000um acrylate coated fibers with buffer diameters up to 1200um. Heater adjustable to 200` C and facilitates stripping difficult, baked on coatings. Adjustable temperature and time settings adaptable for a variety of coatings. Compact design. Weighs less than one lb. Includes AC power supply, coard and cleaning brush. Selectable platforms supplied separately. For Fitel, Fujikura and Ericsson fiber holders use the corresponding platforms. For LDF and all others without fiber holders use the Universal clamp.

Part No.	Description	Each
0602TSFB125	Thermal Stripper Fixed Blade	**$1895.00**
0602TSAB40	Thermal Stripper Adjustable Blade	**2129.00**
0602TSPE125	Ericsson style holder	**159.00**
0602TSPF125	Fitel/Fujikura style holder	**159.00**
0602TSUC40	Universal clamp	**219.00**

WBS LASER

THE MOST VERSATILE LASER ON THE MARKET!



- Voice communications
- Digital line-of-sight communications
- AM/FM radio transmission
- Video from camcorder
- RF video from VCR to receiver to TV

In addition, this laser can be used to conduct regular laser, optics and fiber optic experiments.

FEATURES:

- Semiconductor lasing element and solid-state design for a long, dependable life.
- Bright 635 nanometer laser light output.
- Standard RCA-type input jacks.
- Electrical overdrive protection on all inputs.
- Bright laser pilot light.
- Tamper-resistant screws for safety.
- Threaded mounts for holding lenses, filters and diffraction gratings.
- Operator's manual with safety information and common experiments.
- Labeling and safety requirements compliants with US CDRH regulations.

GROUP PACKAGE:

In addition to the **WBS Laser**, you will also receive a free optical RF video receiver, interconnecting cables, power adapters, and an instruction booklet for setting up a VCR-to Laser-to-Receiver-to-TV link

Part No. 32IFUL08635X • Price: $450.00

COMPLETE LASER COMMUNICATIONS PACKAGE:

You will receive all the items above, as well as a microphone, AM/FM radio, patch cords and an audio receiver.

Part No. 32IFUL08635Y • Price: $695.00

LIGHT RAY VIEWING KIT

The Light Ray Viewing Kit is a small "liquid laboratory." When used with any lasers it creates underwater light ray patterns and diagrams that constitute the basics of all introductory optic studies. In a complementary series of activities in the accompanying instruction guide, students can observe, and more readily understand, principles and equations such as:

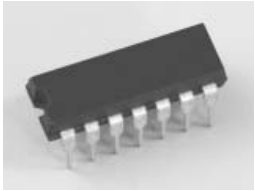
- Snell's Law
- Total internal reflection
- Equal angles of incidence and reflection
- Brewster's Angle
- Critical angle of light

Set-up for each experiment requires less than five minutes and costs only a few pennies. ("Just add water!") Project equipment includes impact-resistant observation tank; four ounces of scattering solution; first-surface mirror; stirring rod; ruler; protractor; and eight full-color instruction guides.

Part No.	Description	Price
08IF548	Complete Kit w/o Laser	$95.00
08IF549	Complete Kit with 0.5mw Helium Neon Laser	395.00

LOGIC 7400 SERIES

For 100+ call for quote.



Part No.	Pins	Function	1-9	10-99
10 7400	14	Quad 2-input NAND gate	$1.10	$1.00
10 7401	14	Quad 2-input NAND gate (O.C.)	0.95	0.85
10 7402	14	Quad 2-input NOR gate	1.70	1.50
10 7403	14	Quad 2-input NAND gate	0.75	0.65
10 7404	14	Hex inverter	1.45	1.30
10 7405	14	Hex inverter (O.C.)	0.95	0.85
10 7406	14	Hex inverter buffer/driver	0.90	0.80
10 7407	14	Hex buffer/driver (O.C.)	0.90	0.80
10 7408	14	Quad 2-input AND gate	1.95	1.75
10 7409	14	Quad 2-input AND gate (O.C.)	0.90	0.80
10 7410	14	Triple 3-input NAND gate	0.95	0.85
10 7411	14	Triple 3-input AND gate	1.50	1.40
10 7412	14	Triple 3-input NAND gate	0.75	0.65
10 7413	14	Dual 4-input NAND schmitt trigger	0.95	0.85
10 7414	14	Hex inverter schmitt trigger	0.95	0.85
10 7416	14	Hex inverter buffer/driver	1.45	1.20
10 7417	14	Hex buffer/driver (O.C. H.V.)	1.25	1.10
10 7420	14	Dual 4-input pos. NAND gate	0.95	0.85
10 7422	14	Dual 4-input pos. NAND gate (O.C.)	0.80	0.70
10 7425	14	Dual 4-input NOR gate with strobe	0.95	0.85
10 7426	14	Quad 2-input NAND gate (O.C.)	0.70	0.60
10 7427	14	Triple 3-input pos. NOR gate	1.05	0.95
10 7430	14	8-input pos. NAND gate	0.95	0.85
10 7432	14	Quad 2-input pos. OR gate	1.70	1.50
10 7433	14	Quad 2-input pos. NOR buffer (O.C.)	0.48	0.44
10 7437	14	Quad 2-input pos. NAND buffer	0.20	0.18
10 7438	14	Quad 2-input pos. NAND buffer(O.C.)	0.45	0.40
10 7440	14	Dual 4-input pos. NAND buffer	0.50	0.40
10 7442	16	BCD-to-dec. decoder	1.40	1.35
10 7444	16	Excess 3-Grcy to Dec.	0.95	0.90
10 7445	16	BCD-to-dec. decoder/driver	1.80	1.60
10 7446	16	BDC-to-7 Seg. decoder/driver (30v out)	1.95	1.75
10 7447	16	BCD-to-7 Seg. decoder/driver (15v out)	2.45	2.20
10 7450	14	Dual 2-wide 2-input AND-OR-INVERT gate	0.45	0.40
10 7451	14	Dual 2-wide 2-input AND-OR-INVERT gate	0.45	0.40
10 7453	14	Expand. 4-wide 2-in. AND-OR-INVERT gate	0.60	0.50
10 7454	14	4-wide 2-input AND-OR-INVERT gate	0.60	0.50
10 7455	14	2-wide 4-in. AND/OR INVERT gate	0.60	0.50
10 7460	14	Dual 4-input expander	0.35	0.30
10 7472	14	AND-gated JK master/slave flip-flop	0.85	0.80
10 7473	14	Dual JK flip-flop with clear	1.90	1.70
10 7474	14	Dual D-type flip-flop w/preset & clr.	1.25	1.15
10 7475	16	4-bit bistable latch	2.50	2.25
10 7476	16	Dual JK flip-flop w/preset & clr.	2.75	2.50
10 7480	14	Full Adder Gated	0.80	0.75
10 7481	14	16-bit active element memory	0.85	0.80
10 7482	14	2-bit binary full adder	0.80	0.75
10 7483	14	4-bit binary full adder	2.90	2.60
10 7485	16	4-bit magnitude comparator	1.95	1,90
10 7486	14	Quad 2-input XOR gate	1.50	1.30
10 7489	16	64 bit RAM (O.C.)	2.90	2.70
10 7490	14	Decade counter	2.50	2.20
10 7491	14	8-bit shift register	0.98	0.95
10 7492	14	Divide-by-12 counter	1.35	1.25
10 7493	14	4-bit binary counter	1.90	1.70

Part No.	Pins	Function	1-9	10-99
10 7495	14	4-bit par-access shift register	$1.90	$1.70
10 7496	16	5-bit shift register	0.48	0.44
10 74107	14	Dual JK flip-flop with clear	0.95	0.85
10 74109	16	Dual JK pos. edge trig. F.F.	0.85	0.65
10 74121	14	Monostable multivibrator	2.25	2.15
10 74123	16	Dual retrig. MS multivibrator	1.95	1.75
10 74125	14	Quad 3-state bus buffer	0.95	0.85
10 74126	14	Quad 3-state bus butter	0.75	0.65
10 74132	14	Quad 2-in-pos. NAND schmitt trigger	0.69	0.58
10 74136	14	Quad 2-input XOR gate (O.C.)	0.60	0.50
10 74145	16	BCD-to-dec. decoder/driver	1.50	1.25
10 74147	16	10-to-4 priority encoder	3.25	2.95
10 74148	16	8-to-3 priority encoder	1.20	1.10
10 74150	24	16-to-1 multiplexer	2.95	2.75
10 74151	16	8-channel dig. multiplexer	0.70	0.60
10 74153	16	Dual 4-to-1 multiplexer	0.90	0.80
10 74154	24	4-to-16 decoder/demux	1.90	1.80
10 74155	16	Dual 2-to-4 decoder/demux	0.80	0.70
10 74156	16	Dual 2-to-4 decoder/demux	0.45	0.40
10 74157	16	Quad 2-to-1 data selector/mux	0.85	0.80
10 74160	16	BCD decade counter	0.75	0.65
10 74161	16	4-Bit binary counter	0.85	0.75
10 74162	16	BCD decade counter	0.78	0.74
10 74163	16	4-bit binary counter	0.75	0.55
10 74164	14	8-bit par-out serial shift register	0.85	0.75
10 74165	16	8-bit par. load serial shift register	0.75	0.70
10 74166	16	8-bit par. load shift register	0.75	0.65
10 74170	16	4x4 register file	0.90	0.85
10 74173	16	4-bit D-type register 3-state	0.95	0.85
10 74174	16	Hex D flip-flop with clear	1.05	0.95
10 74175	16	Quad D flip-flop with clear	1.30	1.20
10 74178	14	4-Bit Shift Register	1.95	1.75
10 74180	14	9-bit odd/even parity gen. checker	1.95	1.75
10 74181	24	Arithmetic logic unit	2.95	2.75
10 74182	16	Look-ahead carry generator	0.90	0.85
10 74184	16	BCD to Binary Conv.	2.50	1.95
10 74190	16	BCD/decade up/down counter	2.50	2.25
10 74191	16	4-bit binary up/down counter	1.45	1.20
10 74192	16	BCD/decade up/down counter	2.95	2.90
10 74193	16	4-bit binary up/down counter	1.95	1.85
10 74194	16	4-bit bi-directional shift register	1.90	1.80
10 74195	16	4-bit par-access shift register	0.95	0.75
10 74197	14	4-bit binary counter	1.25	1.15
10 74199	24	8-bit shift register	1.50	1.25
10 74221	16	Dual MS multivibrator schmitt trig.	1.50	1.25
10 74251	16	8-channel mux 3-state	0.95	0.90
10 74273	20	Octal D flip-flop with clear	1.90	1.80
10 74365	16	Hex buffer/driver 3-state	0.90	0.80
10 74367	16	Hex buffer/driver 3-state	0.90	0.80
10 74390	16	Dual 4-bit decade counter	0.90	0.80

IC LOGIC
LOGIC 74LS SERIES

For 100+ call for quote. **Prices**

Part No.	Pins	Function	1-9	10-99
10 74LS00	14	Quad 2-input NAND gate	$0.40	$0.35
10 74LS01	14	Quad 2-input NAND gate (O.C.)	0.30	0.25
10 74LS02	14	Quad 2-input NOR gate	0.45	0.40
10 74LS03	14	Quad 2-input NAND gate	0.55	0.45
10 74LS04	14	Hex inverter	0.45	0.40
10 74LS05	14	Hex inverter (O.C.)	0.55	0.45
10 74LS06	14	Hex inverter buffer/driver	0.86	0.72
10 74LS07	14	Hex buffer/driver (O.C.)	0.73	0.62
10 74LS08	14	Quad 2-input AND gate	0.45	0.40
10 74LS09	14	Quad 2-input AND gate (O.C.)	0.52	0.40
10 74LS10	14	Triple 3-input NAND gate	0.56	0.46
10 74LS11	14	Triple 3-input AND gate	0.55	0.45
10 74LS12	14	Triple 3-input NAND gate	0.40	0.30
10 74LS13	14	Dual 4-input NAND schmitt trigger	0.95	0.85
10 74LS14	14	Hex inverter schmitt trigger	0.45	0.35
10 74LS15	14	Triple 3-input AND gate	0.45	0.40
10 74LS20	14	Dual 4-input pos. NAND gate	0.75	0.65
10 74LS21	14	Dual 4-input pos. AND gate	0.55	0.45
10 74LS26	14	Quad 2-input NAND gate (O.C.)	0.45	0.40
10 74LS27	14	Triple 3-input pos. NOR gate	0.75	0.65
10 74LS30	14	8-input pos. NAND gate	0.45	0.40
10 74LS32	14	Quad 2-input pos. OR gate	0.40	0.35
10 74LS33	14	Quad 2-input pos. NOR buffer (O.C.)	0.24	0.18
10 74LS37	14	Quad 2-input pos. NAND buffer	0.35	0.30
10 74LS38	14	Quad 2-input pos. NAND buffer(O.C.)	0.24	0.18
10 74LS40	14	Dual 4-input pos. NAND buffer	0.40	0.35
10 74LS42	16	BCD-to-dec. decoder	1.05	0.95
10 74LS47	16	BCD-to-7 Seg. decoder/driver (15v out)	1.25	0.95
10 74LS48	16	BCD-to-7 Seg. decoder/driver	3.75	2.90
10 74LS51	14	Dual 2-wide 2-input AND-OR-INVERT gate	0.35	0.30
10 74LS54	14	4-wide 2-input AND-OR-INVERT gate	0.45	0.40
10 74LS55	14	2-wide 4-in. AND/OR INVERT gate	0.40	0.35
10 74LS73	14	Dual JK flip-flop with clear	1.40	1.20
10 74LS74	14	Dual D-type flip-flop w/preset & clr.	0.45	0.35
10 74LS75	16	4-bit bistable latch	1.15	1.00
10 74LS76	16	Dual JK flip-flop w/preset & clr.	2.50	2.20
10 74LS83	14	4-bit binary full adder	2.15	1.95
10 74LS85	16	4-bit magnitude comparator	0.95	0.85
10 74LS86	14	Quad 2-input XOR gate	0.45	0.35
10 74LS90	14	Decade counter	1.70	1.45
10 74LS91	14	8-bit shift register	0.85	0.75
10 74LS92	14	Divide-by-12 counter	1.90	1.70
10 74LS93	14	4-bit binary counter	1.55	1.35
10 74LS95	14	4-bit par-access shift register	1.50	1.40
10 74LS96	16	5-bit shift register	1.25	1.15
10 74LS107	14	Dual JK flip-flop with clear	1.05	0.95
10 74LS109	16	Dual JK pos. edge trig. F.F.	0.95	0.85
10 74LS112	16	Dual JK edge-trig. flip-flop	0.60	0.50
10 74LS113	14	Dual JK edge-trig. flip-flop	0.58	0.54
10 74LS122	14	Retrig. monostable multivibrator	0.85	0.75
10 74LS123	16	Dual retrig. MS multivibrator	0.60	0.50

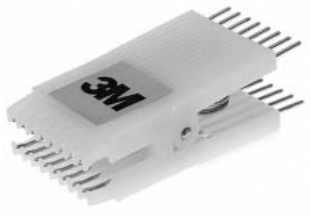
For 100+ call for quote. **Prices**

Part No.	Pins	Function	1-9	10-99
10 74LS125	14	Quad 3-state bus buffer	$0.60	$0.50
10 74LS126	14	Quad 3-state bus butter	0.60	0.50
10 74LS132	14	Quad 2-in-pos. NAND schmitt trigger	0.65	0.55
10 74LS133	16	13-input NAND gate	0.38	0.34
10 74LS136	14	Quad 2-input XOR gate (O.C.)	0.34	0.28
10 74LS138	16	3-to-8 line decoder/demux	0.55	0.45
10 74LS139	16	Dual 2-to-4 decoder/demux	0.55	0.45
10 74LS145	16	BCD-to-dec. decoder/driver	0.65	0.55
10 74LS147	16	10-to-4 priority encoder	4.75	4.25
10 74LS148	16	8-to-3 priority encoder	1.00	0.90
10 74LS151	16	8-channel dig. multiplexer	0.70	0.60
10 74LS153	16	Dual 4-to-1 multiplexer	0.70	0.60
10 74LS154	24	4-to-16 decoder/demux	4.90	4.70
10 74LS155	16	Dual 2-to-4 decoder/demux	0.95	0.85
10 74LS156	16	Dual 2-to-4 decoder/demux	0.80	0.75
10 74LS157	16	Quad 2-to-1 data selector/mux	0.55	0.45
10 74LS158	16	Quad 2-to-1 data select/mux	0.50	0.45
10 74LS160	16	BCD decade counter	2.45	2.20
10 74LS161	16	4-Bit binary counter	0.50	0.40
10 74LS162	16	BCD decade counter	0.56	0.49
10 74LS163	16	4-bit binary counter	0.60	0.50
10 74LS164	14	8-bit par-out serial shift register	0.55	0.45
10 74LS165	16	8-bit par. load serial shift register	0.60	0.50
10 74LS166	16	8-bit par. load shift register	0.85	0.75
10 74LS169	16	4-bit up/down synchr. binary counter	0.95	0.85
10 74LS170	16	4x4 register file	0.58	0.48
10 74LS173	16	4-bit D-type register 3-state	1.05	0.95
10 74LS174	16	Hex D flip-flop with clear	0.65	0.55
10 74LS175	16	Quad D flip-flop with clear	0.65	0.55
10 74LS181	24	Arithmetic logic unit	3.90	3.45
10 74LS189	16	16 x 4 static ram 3-state	3.78	3.48
10 74LS190	16	BCD/decade up/down counter	2.90	2.70
10 74LS191	16	4-bit binary up/down counter	0.75	0.65
10 74LS192	16	BCD/decade up/down counter	3.45	3.20
10 74LS193	16	4-bit binary up/down counter	0.75	0.65
10 74LS194	16	4-bit bi-directional shift register	0.95	0.75
10 74LS195	16	4-bit par-access shift register	2.00	1.90
10 74LS197	14	4-bit binary counter	0.80	0.75
10 74LS221	16	Dual MS multivibrator schmitt trig.	0.80	0.70
10 74LS240	20	Octal buffer/line driver 3-st.	0.65	0.50
10 74LS241	20	Octal buffer/line driver 3-st.	0.70	0.60
10 74LS242	14	Quad bus transceiver	0.60	0.55
10 74LS243	14	Quad bus transceiver 3-st.	0.60	0.55
10 74LS244	20	Octal buffer 3-st.	0.60	0.50
10 74LS245	20	Octal bus transceiver 3-st.	0.60	0.50
10 74LS247	16	BCD/7 seg. decoder driver (o.c.)	1.15	1.05
10 74LS251	16	8-channel mux 3-state	0.60	0.55
10 74LS253	16	Dual 4-to-1 data select/mux 3-st.	0.60	0.55
10 74LS257	16	Quad 2-input mux 3-st.	0.60	0.55
10 74LS258	16	Quad 2-to-1 mux 3-st.	0.60	0.55
10 74LS259	16	8-bit addressable latch	0.85	0.75
10 74LS260	14	Dual 5-input NOR gate	0.60	0.50
10 74LS266	14	Quad 2-IN XNOR gate (O.C.)	0.75	0.65

DIP IC TEST CLIPS

Designed for easier DIP IC testing and troubleshooting. The heavy duty metal spring provides a firm positive grip to DIP under test.

Part No.	Description	Width	Price
03TC16	16-Pin (used for 8, 14, 16 pin IC's)	0.3"	$12.90
03TC28	28-Pin (used for 24, 28 pin IC's)	0.6"	15.90
03TC40-3M	40-Pin	0.6"	9.90



ICs

LOGIC 74LS SERIES (CON'T)

For 100+ call for quote.

Part No.	Pins	Function	Prices 1-9	Prices 10-99
10 74LS273	20	Octal D flip-flop with clear	$0.65	$0.50
10 74LS279	16	Quad set/reset latch	0.85	0.75
10 74LS280	16	9-bit odd/even parity gen/chkr	0.29	0.19
10 74LS283	16	4-bit full adder	1.05	0.95
10 74LS290	14	Decade counter	0.58	0.55
1074LS293	14	4 Bit Binary Counter	1.65	1.45
10 74LS299	20	8-bit univ. shift/storage register	1.09	0.99
10 74LS322	20	8-bit shift register	1.65	1.50
10 74LS365	16	Hex buffer/driver 3-state	0.40	0.35
10 74LS366	16	Hex inverter/buffer 3-state	0.40	0.35
10 74LS367	16	Hex buffer/driver 3-state	0.85	0.75
10 74LS368	16	Hex inverter/buffer 3-state	0.90	0.80
10 74LS373	20	Octal transparent latch	0.65	0.50
10 74LS374	20	Octal dual flip-flop 3-state	0.65	0.50
10 74LS375	16	4-bit bistable latch	0.88	0.80
10 74LS377	20	Octal D flip-flop W/com. enable	0.95	0.85
10 74LS386	14	Quad 2-input ex-OR-gate	0.49	0.44
10 74LS390	16	Dual 4-bit decade counter	1.15	1.05
10 74LS393	14	Dual 4-bit binary counter	0.80	0.70
10 74LS395	16	4-Bit cascade, shift regis. 3-state	0.40	0.35
10 74LS540	20	Octal buffer/line driver 3-state	1.25	1.15
10 74LS541	20	Octal buffer/line driver 3-state	0.90	0.80
10 74LS573	20	Octal D-Flip Flop Tri State	2.90	2.70
10 74LS574	20	Octal D Flip Flop – Edge Trig.	2.45	2.20
10 74LS640	20	Octal bus transceiver 3-state	0.75	0.60
10 74LS670	16	4 x 4 register file 3-state	0.75	0.60

CONVERTERS:

Indust. No.	Part No.	Pins	Description	Prices
DAC0800	10DAC0800	16	8-bit D/A Converter (1LSB)	$1.50
DAC0806	10DAC0806	16	8-bit D/A Converter	1.28
DAC0808	10DAC0808	16	8-bitD/A Converter	1.50
DAC0830	10DAC0830	20	8-bit UP D/A Converte (.05% Lin.)	4.95
DAC0832	10DAC0832	20	8-bit D to A Converter	2.90
MC1408	101408	16	8-bit D/A Converter	1.50
AD558	10AD558	16	8-bit A/D Converter	12.75
AD7569	10AD7569	24	8-bit A to D I/O System	8.95
ADC0803	10ADC0803	20	8-bit A to D Converter (1/2 LSB)	3.95
ADC0804	10ADC0804	20	8-bit A/D Converter	2.25
ADC0808	10ADC0808	28	8-bit A/D Converter w/8 Ch. Anl.	4.45
ADC0809	10ADC0809	28	8-bit Converter (8-ch. MPX)	2.50
ADC0838	10ADC0838	20	8-bit A/D Converter (8-Ch MPX)	1.95
ICL7106	107106	40	3 1/2 Dig. LCD A/ D Converter	2.75
MC14433	1014433	24	3 1/2 Dig. A/D Converter	5.75

PIC MICROCONTROLLER

Part No	Pins	Memory	Speed (MHz)	ROM Word	RAM Bytes	I/O Pins	Price
10 PIC12F629-I/P	8	Flash	20	1K	64	6	$1.59
10 PIC16C56A-04/P	18	OTP	4	1K	25	12	2.50
10 PIC16C622A-04/P	18	OTP	4	2K	128	13	2.70
10 PIC16F74-I/SP	40	Flash	20	4K	192	8	6.20
10 PIC16F77-I/P	40	Flash	20	8K	368	8	7.05
10 PIC16F84A-04/P	18	Flash	4	1K	68	13	5.50
10 PIC16F84A-20P	18	Flash	20	1K	68	13	5.75
10 PIC16F676-I/P	14	Flash	20	1K	64	12	2.19
10 PIC16F818-I/P	18	Flash	20	1K	128	16	3.05
10 PIC16F873A-I/SP	28	Flash	20	4K	192	22	6.25
10 PIC16F877A-I/P	40	Flash	20	8K	368	33	7.20
10 PIC18F452	40	Flash	40	32K	1,536	23	8.85
10 PIC18LF242	40	Flash	40	8K	768	23	7.35

VOLTAGE REGULATORS

For 100+ call for quote.

Indust. Part No.	Part No.	Voltage	Current	Package	Prices
LM317K	10317-K	Adjustable	1A	TO-3	2.50
LM317T	10317-T	Adjustable	1A	TO-220	0.35
LM337K	10337-K	Adjustable	1.5A	TO-3	1.95
LM337T	10337-T	Adjustable	1A	TO-220	0.75
LM338K	10338-K	Adjustable	5A	TO-3	4.95
LM350T	10350-T	Adjustable	3A	TO-220	0.70
LM323K	10323-K	+5V	3A	TO-3	3.50
LM323T	10323-T	+5V	3A	TO-220	1.95
LM338T	10338-T	Adjustable	5A	TO-220	1.25
LM723N	10723-N	Adj. (2-37V)	.2A	DIP-14	0.38
78S40	1078S40	Adjustable	1.0A	16 Pin DIP	1.25
78L05	107805-L	+5V	100mA	TO-92	0.22
7805T	107805-T	+5V	1.0A	TO-220	0.35
7805K	107805-K	+5V	1.5A	TO-3	2.50
7806T	107806-T	+6V	1A	TO-220	0.35
7808T	107808-T	+8V	1.0A	TO-220	0.39
7809T	107809-T	+9V	1A	TO-220	0.60
78L12	107812-L	+12V	100mA	TO-92	0.22
7812T	107812-T	+12V	1.0A	TO-220	0.35
7812K	107812-K	+12V	1.5A	TO-3	1.95
78L15	107815-L	+15V	100mA	TO-92	0.35
7815T	107815-T	+15V	1.0A	TO-220	0.35
7815K	107815-K	+15V	1.5A	TO-3	1.95
7824T	107824-T	+24V	1.0A	TO-220	0.39
79L05	107905-L	-5V	100mA	TO-92	0.29
7905T	107905-T	-5V	1.0A	TO-220	0.39
7905K	107905-K	-5V	1.5A	TO-3	1.95
7908T	107908-T	-8V	1A	TO-220	0.55
79L12	107912-L	-12V	100mA	TO-92	0.29
7912T	107912-T	-12V	1.0A	TO-220	0.45
7912K	107912-K	-12V	1.5A	TO-3	1.95
79L15	107915-L	-15V	100mA	TO-92	0.39
7915T	107915-T	-15V	1.0A	TO-220	0.45
7915K	107915-K	-15V	1.5A	TO-3	1.35
7924T	107924-T	-24V	1.0A	TO-220	0.49

UART:

Indust. No.	Part No.	Pins	Description	Prices
AY3-1015	10AY31015	40	UART 25K Baud	11.95
AY3-8910	10AY38910	–	Prog. Sound Generator	7.95
AY5-8116	10AY58116	18	Baud Rate Gen. Dual	7.95

VIZATEK PORTABLE DIGITAL IC TESTER

Best Value!

HAND-HELD UNIT

MODEL VZ4

This unit will readily test TTL, CMOS series ICs.

- Supports the following:
  TTL Series: 7400, 74LS00
  CMOS Series : CD4000, CD4500
- **Display**: 16 characters in 1 line LCD
- **Test Pins:** 14 to 24 pins
- **Power:** 9V battery *(included)*
- **Weight:** 1 lb.; **Size**: 6.3" x 4.3" x 1.8"

Part No.	Description	Price
01VZ4	Digital IC Tester, Portable	$225.00

ICs

LOGIC CMOS – CD4000 SERIES

Part No.	Pins	Function *For 100+ call for quote.*	Prices
10 CD4001	14	Qual 2-input NOR buffered gate	0.30
10 CD4002	14	4-input NOR gate	0.25
10 CD4007	14	Dual comp pair/inverter	0.30
10 CD4009	16	Hex buffer (inverting)	0.49
10 CD4010	16	Hex buffer (non-inverting)	0.30
10 CD4011	14	Quad 2-input NAND gate	0.35
10 CD4012	14	Dual 4-input NAND gate	0.30
10 CD4013	14	Dual D-flip-flop with set-reset	0.35
10 CD4015	16	Dual 4 bit static shift register	0.35
10 CD4016	14	Quad bilateral switch	0.35
10 CD4017	16	Decade counter/divider	0.40
10 CD4018	16	Divide-by-N counter	0.38
10 CD4019	16	Quad AND-OR select gate	0.40
10 CD4020	16	14-stage Binary/Ripple counter	0.44
10 CD4022	16	Divide-by-8 counter	0.59
10 CD4023	14	Triple 3-input NAND gate	0.30
10 CD4024	14	7-stage binary/ripple counter	0.30
10 CD4025	14	Triple 3-input NOR gate	0.35
10 CD4027	16	Dual JK flip-flop	0.30
10 CD4028	16	BCD to decimal decoder	0.35
10 CD4029	16	Binary/decimal up/down counter	0.40
10 CD4034	24	8 bit 3-static shift/register	1.50
10 CD4035	16	4-bit parallet-in/parallel-out shift. reg.	0.35
10 CD4040	16	12-stage binary/ripple counter	0.32
10 CD4041	14	Quad True/Complement Buffer	0.35
10 CD4042	16	Quad clocked D latch	0.35
10 CD4043	16	Quad 3-state NOR R/S latch	0.34
10 CD4044	16	Quad 3-state NAND R/S latch	0.44
10 CD4046	16	Micropower phase-locked loop	0.45
10 CD4047	14	LP MS/AS multivibrator	0.58
10 CD4049	16	Hex inverting buffer	0.24
10 CD4050	16	Hex non-inverting buffer	0.24
10 CD4051	16	Single 8-channel analog multiplexer	0.45
10 CD4052	16	4-channel analog multiplexer	0.45
10 CD4053	16	Triple 2-channel analog multiplexer	0.45

Part No.	Pins	Function *For 100+ call for quote.*	Prices
10 CD4059	24	Programmable divide-by-N counter	$2.50
10 CD4060	16	14-stage binary/ripple counter	0.48
10 CD4066	14	Quad bilateral switch	0.34
10 CD4068	14	8-input AND/NAND gate	0.39
10 CD4069	14	Inverter	0.30
10 CD4070	14	Quad 2-input XOR gate	0.45
10 CD4071	14	Quad 2-input OR buffered gate	0.40
10 CD4072	14	Dual 4-input OR gate	0.25
10 CD4073	14	Triple 3-input AND gate	0.24
10 CD4076	16	Quad D-Type Register	0.48
10 CD4077	14	Quad EXCLUSIVE-NOR Gate	0.32
10 CD4078	14	8-Input NOR Gate	0.32
10 CD4081	14	Quad 2-input AND gate	0.32
10 CD4082	14	Dual 4-input AND gate	0.35
10 CD4093	14	Quad 2-input NAND schmitt trigger	0.35
10 CD4094	16	8-Stage Shift & Store Reg.	0.48
10 CD4510	16	Presettable up/down counter	0.64
10 CD4511	16	BCD to 7-segment latch/decoder	0.65
10 CD4512	16	8-channel date selector	0.58
10 CD4514	24	4-bit latch/4-16 decoder	0.88
10 CD4515	24	4-bit latch/4-16 decoder	0.98
10 CD4516	16	Presettable up/down counter	0.48
10 CD4518	16	Dual BCD up counter	0.48
10 CD4520	16	Dual up binary up counter	0.44
10 CD4528	16	Dual MS multivibrator	0.89
10 CD4532	16	8-Bit Priority Encoder	0.60
10 CD4538	16	Dual MS multivibrator	0.48
10 CD4543	16	BCD to 7 segment decoder (LCD)	0.45
10 CD4553	16	3 digit BCD counter	1.95
10 CD40102	16	BCD Down Counter 2-Decade	1.95
10 CD40103	16	8-bit binary COS/MOS pre. sync. down cntr.	1.49
10 CD40106	14	Hex schmitt trigger	0.38
10 CD40107	8	Dual 2-input NAND buffer driver	0.49
10 CD40109	16	Quad level shifter low to HIV.	1.45
10 CD40174	16	Hex "D" – Type Flip-Flop	0.58

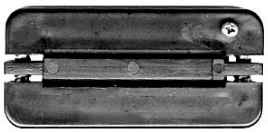
PALS & GALS

Part No.	Pins	Description	Prices
10 PAL16L8	20	Octal 16-Input AND-OR-INVERT Array	0.98
10 GAL16V8-15	20	GAL 16-Input, 8 Out – 15n sec.	1.38
10 GAL16V8-25	20	GAL 16-Input, 8 Out – 25n sec.	1.28
10 GAL22V10-15	24	GAL 22 Input, 10 Output	4.48
10EPM7128SLC84-15	84	CPLD Altera Chip	16.50
10XC95108-20PC84	84	CPLD Xilinx Chip	10.50

IC PIN STRAIGHTENER

Straighten bent pins easily and safely.

- Straighten 8, 14, 16, 18, 20, 24, 28, 40, 48 pin ICs
- Size: 3.3" x 1.5" x 0.4"
- Color: black plastic
- Includes a ground terminal



Part No.	1-9	10+
03ICS-01	$7.95	$7.70

RSR

ANTI-STATIC FOAM

Conductive antistatic foam material for bench or shipping ensures a safe work area.

Part No.	Size	1-9	10+
0302ASF	4" x 5"	$0.90	$0.80
0302ASF1	24" x 12"	9.20	8.30

IC EXTRACTOR

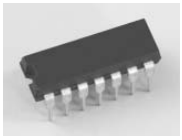
Part No.	Fig	1-9	10+
060400	A	$1.25	$0.90
060401	B	3.90	3.40
060404 *(Insulated Handle)*	A	1.30	0.95

Fig. A

Fig. B

ICs

LOGIC – 74HC00 SERIES

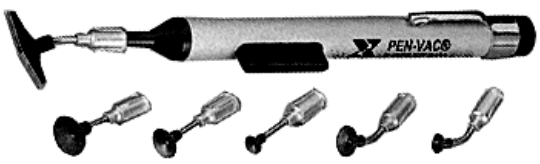


Part No.	Pins	Function	Prices
10 74HC00	14	Quad 2-Input NAND Gate	0.20
10 74HC02	14	Quad 2-InputNOR Gate	0.24
10 74HC04	14	Hex Inverter (Buffered)	0.30
10 74HCU04	14	Hex Inverter (Unbuffered)	0.10
10 74HC05	14	Hex Inverter	0.28
10 74HC08	14	Quad 2-Input AND Gate	0.30
10 74HC10	14	Triple 3-Input NAND Gate	0.25
10 74HC11	14	Triple 3-Input	0.35
10 74HC14	14	Hex Inverter Schmitt Trigger	0.34
10 74HC20	14	Dual 4-Input NAND Gate	0.35
10 74HC30	14	8-Input NAND Gate	0.30
10 74HC32	14	Quad 2-Input OR Gate	0.24
10 74HC42	16	BCD-to-Decimal Decoder	0.49
10 74HC51	14	Dual 2-Input AND-OR-Invert Gate	0.25
10 74HC74	14	Dual D Flip Flop with Present and Clear	0.28
10 74HC85	16	4-Bit Magnitude Comparator	0.48
10 74HC86	14	Quad 2-Input (EXCLUSIVE) OR (XOR) Gate	0.28
10 74HC93	14	CMOS 4-Bit Binary Counter	0.85
10 74HC107	14	Dual J-K Flip Flop	0.50
10 74HC112	16	Dual J-K Flip Flop with Preset and Clear	0.55
10 74HC123	16	Dual Monostable Multivibrator	0.48
10 74HC132	14	Quad 2-Input NAND Schmitt Trigger	0.30
10 74HC138	16	3 to 8 Line Decoder	0.30
10 74HC139	16	Expandable Dual 2/4 Line Decoder	0.38
10 74HC147	16	10/4 Lin. Priority Encoder	1.90
10 74HC151	14	8 to 1 Data Selector Max.	0.25
10 74HC153	16	Dual 4-Input Multiplexer	0.38
10 74HC154	24	4/16 Line Decoder (use 24SLP Socket)	1.24
10 74HC157	16	Quad. 2/1 Data Selector	0.22
10 74HC160	16	Synchronous Decade Counter	0.30
10 74HC161	16	Synchronous Binary Counter	0.30
10 74HC163	16	Synchronous Binary Counter	0.44
10 74HC164	14	8-Bit Serial-in/Parallel-out Shift Register	0.44
10 74HC165	16	8-Bit Parallel-in/Serial-out Shift Register	0.48
10 74HC173	16	Quad "D" Type Flip Flops	0.45
10 74HC174	16	Hex D Flip-Flop with Clear	0.34
10 74HC175	16	Quad D Type Flip Flop with Clear	0.34
10 74HC191	16	Up/Down Binary Counter	0.65
10 74HC192	16	Synchronous Decade Up/Down Counter	1.40
10 74HC193	16	Synchronous Binary Up/Down Counter	0.90
10 74HC194	16	Universal Shift Register	0.35
10 74HC221	16	Dual Monostable Multivibrator	0.54

Part No.	Pins	Function	Prices
10 74HC240	20	Inverting Octal Tri-State Buffer	0.44
10 74HC242	14	Inverting Quad Tri-State Transceiver	0.59
10 74HC244	20	Octal Tri-State Buffer	0.44
10 74HC245	20	Octal Tri-State Transceiver	0.44
10 74HC253	16	Dual 4-Channel Tri-State Mutiplexer	0.45
10 74HC257	16	Quad 2-Channel Tri-State Multiplexer	0.45
1074HC273	20	Octal D Flip Flop	0.58
10 74HC280	14	9-Bit Odd/Even Parity Generator/Checker	0.65
10 74HC283	16	4-Bit Binary Full Adder	0.75
10 74HC299	20	8-Bit Tri-State Universal Shift Register	0.78
10 74HC365	16	Hex Tri-State Buffer	0.49
10 74HC366	16	Hex Bus Drivers	0.25
10 74HC367	16	Tri-State Hex Buffer	0.29
10 74HC373	20	Tri-State Octal D Type Latch	0.48
10 74HC374	20	Tri-State Octal DType Flip Flop	0.48
10 74HC390	16	Dual 4-Bit Decade Counter	0.49
10 74HC393	14	Dual 4-Bit Binary Counter	0.48
1074HC540	20	Octal Invert Buffer/Line Driver	0.58
10 74HC541	20	Octal Buffer/Line Driver (Tri-State)	0.68
10 74HC573	20	Tri-State Octal D-Type Latch	0.68
10 74HC574	20	Tri-State Octal D-Type Flip Flop	0.68
10 74HC595	16	8-Bit Serial-to-Parallel Shift Register Latch	0.88
10 74HC688	20	8-Bit Mag. Comparator (Equality Detector)	0.68
10 74HC4002	14	Dual 4-Input NOR Gate	0.50
10 74HC4016	14	Quad Bilateral SW	0.45
10 74HC4017	16	Decade Counter/Div. 10	0.58
10 74HC4020	16	14-Stage Binary Counter	0.60
10 74HC4024	14	7-Stage Ripple Counter	0.48
10 74HC4040	16	12-Stage Binary Counter	0.54
10 74HC4046	16	CMOS Phase Lock Loop	1.28
10 74HC4049	16	Hex Inverting Buffer	0.35
10 74HC4051	16	Single 8-Channel Mult/Demult	0.78
10 74HC4052	16	Dual 4-Channel Ana Mux/Demux	0.40
10 74HC4053	16	Triple 2-Channel Mux.	0.95
10 74HC4066	14	Quad Analog Switch	0.48
10 74HC4511	16	BCD to 7-Seg. Latch/Decoder Driver	1.75
10 74HC4514	24	4/16 Line Decode w/Latch	1.74
10 74HC4538	16	Dual Retriggerable Monostable Multivib.	0.78
10 74HC4543	16	BCD to 7-Seg. Latch/Decoder LCD	0.75

XYTRONIC®

VACUUM PEN HANDLING TOOL



- Picks up 500g or less components
- Aluminum body that is ESD Safe
- Kit includes 6 tips and suction cups

Part No. 0603V8920 · Price $41.95

RSR EPROM ERASER

MODEL LER-121A

- Professional performance, economic price
- Accommodates up to 12 EPROMS (24 pin)
- Built-in timer can be set for 0 – 60 minutes
- High quality, durable metal construction
- Powerful U-V tube with electronic starter, extends life of tube
- Auto shut-off switch when door is open prevents user from U-V exposure
- LED indicator for tube status (on/off)

MODEL LER-123A

- Larger size, 5 times the erasing area of ***Model LER-121A***
- Accommodates up to 64 pieces of EPROMs (24 pin)
- Suitable for production line.

Part No.	Description	Price
01LER121A	Model LER-121A	$99.00
01LER123A	Model LER-123A	165.00

ICs
LINEAR

Indust. No.	Part No.	Pins	Description	Prices
LM10CN	10LM10	8	Low Vo. Op-Amp	$1.50
MF10CN	1010	20	Dual Active Filter	2.95
LM34DZ	1034		Temp Transducer F	1.95
LM35DZ	1035		Temp Transducer C	1.50
TL071	10071	8	Lo-Noise BIFET Op-Amp	0.48
TL072	10072	8	Lo-Noise BIFET Dual Op-Amp	0.58
TL074	10074	14	Lo-Noise BIFET Quad Op-Amp	0.68
TL081	10081	8	J-FET Input Op-Amp	0.48
TL082	10082	8	Dual BIFET Op-Amp	0.48
TL084	10084	14	Quad BIFET Op-Amp	0.68
RS232	10232	16	TTL Line Receiver	1.75
MAX233	10233	20	RS-232 Interface Line DRVR	5.95
TLC274	10274	14	Quad Single Supply Op-Amp	1.95
LM301AN	10301	8	Oper. Amplifier	0.44
LM310N	10310	8	Op Amp Voltage Follower	5.50
LM311	10311	8	Hi-Perf. Volt. Comparator	0.38
LM317K	10317-K	TO-3	Volt. Regulator Adjustable 1A	2.50
LM317T	10317-T	TO-220	Volt. Regulator Adjustable 1A	0.35
LM318	10318	8	Prec. Hi-Speed Op-Amp	0.85
LM318-H	10318-H	TO-5	Prec. Hi-Speed Op-Amp	1.59
LM318-N14	10318-14	14	Prec. Hi-Speed Op-Amp	0.60
LM319	10319	14	Hi-Speed Dual Comparator	0.89
LM323K	10323-K	TO-3	Volt. Regulator +5V 3A	3.50
LM323T	10323-T	TO-220	Volt. Regulator +5V 3A	1.95
LM324	10324	14	Low Pwr. Quad Op-Amp	0.25
LM331	10331	8	Volt to Freq. Converter – Prec.	2.25
LM334Z	10334	TO-92	Constant Current Source	0.89
LM335Z	10335	TO-92	Volt Mode Temp. Sensor	1.19
LM336Z	10336	TO-92	Voltage Reference	0.79
LM337K	10337-K	TO-3	Volt. Regulator Adjustable 1.5A	1.95
LM337T	10337-T	TO-220	Volt. Regulator Adjustable 1A	0.75
LM338K	10338-K	TO-3	Volt. Regulator Adjustable 5A	4.95
LM338T	10338-T	TO-220	Volt. Regulator Adjustable 5A	1.25
LM339	10339	14	Quad Comparator	0.25
LM346	10346	14	Quad OP/AMP – Prog.	0.89
LF347	10347	14	Quad J-FET input Op-Amp	0.69
LM348	10348	14	Quad 741 Op-Amp	0.48
LM350T	10350-T	TO-220	Volt. Regulator Adjustable 3A	0.70
LF351	10351	8	BIFET Op-Amp	0.58
LF353	10353	8	Dual BIFET Op-Amp	0.58
LF355	10355	8	Op-Amp JFET, Low Power	0.78
LF356	10356	8	J-FET Gen. Purp. Input Op-Amp	0.88
LF356-H	10356-H	TO-5	Op-Amp JFET Metal	0.95
LF357	10357	8	J-FET Input Op-Amp (wideband)	1.75
LM358	10358	8	Dual Lo-Pwr. Op-Amp	0.38
LM380	10380	14	Audio Amp; 2W	0.95
LM380N-8	10380N-8	8	Audio Amp; 8-Pin; .6W	0.75
LM386N-1	10386N-1	8	Audio Amp, Low Voltage 6V	0.45
LM386N-3	10386N-3	8	Audio Amp, Low Voltage 9V	0.69
LM386N-4	10386N-4	8	Audio Amp, Low Volt.	0.75
LM386	10386	8	Audio Amp.	0.45
LM393	10393	8	Dual Comparator	0.29
LF398	10398	8	Sample & Hold Amplifier	1.85
LF411	10411	8	J-FET Input Op-Amp	0.88
TL507	10507	8	A/D Converter Dec. O/P	1.95
NE521	10521	14	Hi-Speed Dual Comparator	0.75
NE529	10529	14	Comparator Single	1.25

Indust. No.	Part No.	Pins	Description	Prices
NE531-H	10531	TO-5	Oper. Amplifier Metal Can	1.45
NE555	10555	8	Timer	0.22
TLC555	10TLC555	8	Timer CMOS	0.40
NE556	10556	14	Dual 555 Timer	0.40
NE558	10558	16	Quad 555 Timer	1.25
NE565	10565	14	Phase Locked Loop	2.50
LM567	10567	8	Tone Decoder Phase Locked Loop	1.25
NE592	10592	14	Video Amplifier	0.40
LM723N	10723-N		Volt. Regulator Adj. (2-37V) .2A DIP-14	0.38
LM725	10725	8	Op-Amp Instrument	2.49
LM733	10733	14	Video Amplifier	0.69
LM741CN	10741	8	Compensated Op-Amp	0.22
LM741-H	10741-H	TO-5	Compensated Op-Amp (Metal Can)	1.75
LM747	10747	14	Dual 741 Op Amp	1.60
L293D	10L293D	16	Motor Driver/Quad Half H Driver	2.50
LM833	10LM833	8	Op Amp Audio Dual	0.90
MC1455	101455	8	Timer	0.45
MC1458	101458	8	Dual Compar. Op-Amp	0.38
MC1488	101488	14	Quad Line Driver	0.38
MC1489	101489	14	Quad Line Receiver	0.38
MC1496	101496	14	Balanced Mod/Demod	0.88
MC1648	101648	14	Volt. Control Oscillator	6.95
MC1800	101800	16	PLL Stereo Decoder	1.95
MC3418P	103418	16	Modulator / Demodulator CVSD	6.95
LM1875T	101875-T	TO-220/5	20 Watt Audio / Pwr Amp	2.50
LM1877-9	101877N-9	14	Power Amplifier 2W, Dual	1.50
ULN2003	102003	16	Darlington Transist. Array	0.58
ULN2004	102004	16	Curr. Darl. Trans. Array	0.58
ULN2046	102046	16	Transistor Array	1.75
ULN2081	102081	16	7 NPN Transistor Array	1.50
ULN2083	102083	16	Transistor Array	0.95
XR2203	102203	16	Darlington Trans. Array	0.75
XR2206	102206	16	VCO Waveform Generator	7.50
XR2212	102212	16	FSK MOD/DEMOD	8.65
XR2211	102211	14	FSK Mod/Demos	1.75
MPQ2222	102222	14	Tran. Array Si Quad NPN	1.75
ULN2577	102577	TO-220	Regulator Adj. Step-Up	4.50
ULN2803	102803	18	Hi Volt Darl. Tran. Array	0.98
ULN2805	102805	–	Darlington Transister Array	1.10
LM2901	102901	14	Low Pwr. Quad Comparator	0.29
LM2907	102907	14	Freq. to Volt. Converter	1.94
MPQ2907	10MPQ2907	14	PNP Trans. Array	0.90
TCM2910	102910	24	Codec u-Law	8.50
TCM29C16	1029C16	24	IC Codec	7.95
LM2917	102917	14	Freq. to Volt. Converter	1.75
LM2917-8	102917-8	8	Freq. to Volt. Converter	1.20
CA3028H	103028H	TO-5	Diff/Cascade Amplifier	6.95
CA3046	103046	14	Transistor Array	0.65
CA3080	103080	8	Oper. Transdconductance Amp.	1.80
CA3086	103086	14	NPN Transistor Array	0.95
CA3130	103130	8	CMOS Op Amp MOS FET	1.28
CA3140	103140	8	BI-MOS Op-Amp	0.79
CA3146	103146	14	Hi-Volt Transistor Array	1.79
CA3160	103160	8	CA3130 w/internal Freq. Comp.	1.80

FLASH PROGRAMMER
TWO SOCKET

- Small, portable stand-alone Flash programmer
- Two operation modes: stand-alone and PC mode
- 5 function keys:
  - — Function
  - — Type
  - — Blank check
  - — Verify and check sum
  - — Program

Accessories included CD ROM (Windows 95/98/NT/2000/ME/XP), USB cable, 12V wall adapter. Programs: EPROM, EEPROM and FLASH

Part No. 01LP3 • Price: $250.00

RSR — LINEAR IC TESTER — PORTABLE
MODEL LP2

- Easy to operate tester, specially designed for linear IC's (op-amps, comparators, opto, regulators, special function devices, transistor arrays).
- Light, compact, low power consumption (battery operated).
- **Average Search Time**: 0.8 seconds.
- **Display:** 16 characters in 1 line LCD
- **Test Pins**: 8 ~ 16 pins.
- **Test Voltage**: 5V
- Equipped with empty-load test. Auto Power Off.
- **Dimensions and Wt.**: 6.3 x 1.8" x 4.4"; 12 oz.

Part No. 01LP2 • Price: $795.00

ICs – LINEAR (CON'T)

Indust. No.	Part No.	Pins	Description	Prices
UGN3144	11UGN3144	TO-92	Hall Effect Sw Extra Sensitive	0.90
UGN3503	11UGN3503	TO-92	Hall Effect SW.	1.20
MC3302	103302	14	Quad Comparator	0.45
MC3403	103403	14	Quad Op-Amp	0.85
MC3405	103405	14	Dual Op-Amp	1.20
MC3456	103456	14	Dual Timer	0.70
MC3470	103470	18	Flop Disk Read Amp. Sys.	0.95
MC3479	103479	16	Bipolar Stepper Motor Driver	4.50
MC3487	103487	16	Quad RS422 Line Driver	0.69
SG3524	103524	16	Regulating Pulse Width Mod.	1.00
XR3525	103525	16	Regulator Switching	1.55
LM3886T	103886T	TO-220-11	HP Audio Amp 68W	7.75
LM3900	103900	14	Quad Op-Amp	1.50
LM3909	103909	8	LED Flasher	3.50
LM3914	103914	18	Bar Graph Display Driver	1.75
LM3915	103915	18	Bar Graph Display-Interface	1.75
UCN4202	104202	16	Driver & Tran. Stepper Mot.	3.95
UDN6118	106118	18	Fluorescent Display Driver	2.50
NE5036	105036	8	A/D Converter Binary O/P	2.20
LM5534	105534	8	Op-Amp Low Noise	0.68
UCN5804	105804	16	Interface Stepper Motor	7.95
UDN6128	106128	18	Fluorescent Display Driver	0.95
ICL7106	107106	40	A/D Converter	2.75
ICM7555	107555	8	Timer CMOS Low Pwr.	0.58
ICM7556	107556	14	Timer CMOS Low Pwr. Dual	1.35
ICL7652	107652	14	Linear Op Amp Chopper Stabilized	4.50
TL7705	107705	8	Pwr. Supply Supervisory Ckt.	0.99
78S40	1078S40		Volt. Reg. Adj. 1.0A 16 Pin DIP	1.25
78L05	107805-L	TO-92	Volt. Regulator +5V 100mA	0.22
7805T	107805-T	TO-220	Volt. Regulator +5V 1.0A	0.35
7805K	107805-K	TO-3	Volt. Regulator +5V 1.5A	2.50
7806T	107806-T	TO-220	Volt. Regulator +6V 1A	0.35
7808T	107808-T	TO-220	Volt. Regulator +8V 1.0A	0.39
7809T	107809-T	TO-220	Volt. Regulator +9V 1A	0.60
78L12	107812-L	TO-92	Volt. Regulator +12V 100mA	0.22
7812T	107812-T	TO-220	Volt. Regulator +12V 1.0A	0.35
7812K	107812-K	TO-3	Volt. Regulator +12V 1.5A	1.95
78L15	107815-L	TO-92	Volt. Regulator +15V 100mA	0.35
7815T	107815-T	TO-220	Volt. Regulator +15V 1.0A	0.35
7815K	107815-K	TO-3	Volt. Regulator +15V 1.5A	1.65
7824T	107824-T	TO-220	Volt. Regulator +24V 1.0A	0.39
79L05	107905-L	TO-92	Volt. Regulator -5V 100mA	0.29
7905T	107905-T	TO-220	Volt. Regulator -5V 1.0A	0.39
7905K	107905-K	TO-3	Volt. Regulator -5V 1.5A	1.95
7908T	107908-T	TO-220	Volt. Regulator -8V 1A	0.55
79L12	107912-L	TO-92	Volt. Regulator -12V 100mA	0.29
7912T	107912-T	TO-220	Volt. Regulator -12V 1.0A	0.45
7912K	107912-K	TO-3	Volt. Regulator -12V 1.5A	1.95
79L15	107915-L	TO-92	Volt. Regulator -15V 100mA	0.39
7915T	107915-T	TO-220	Volt. Regulator -15V 1.0A	0.45
7915K	107915-K	TO-3	Volt. Regulator -15V 1.5A	1.95
7924T	107924-T	TO-220	Volt. Regulator -24V 1.0A	0.49
F9368	109368	14	7-Seg. Display Driver w/Latch	4.75
UA9638	109638	8	Dual Hi-Speed Diff. Line Drvr.	1.50
75107	1075107	14	Dual Line Rcvr.	0.48
75150	1075150	8	Dual Line Driver Rs 232	0.69
75154	1075154	16	Quad Line Rcvr. Rs 232	0.88
75160	1075160	20	Octal Gen. Pur. Intrfc. Bus Transcvr.	1.49
SN75451	1075451	8	Dual Peripheral AND Driver	0.34
SN75452	1075452	8	Dual Periph. NAND Driver	0.44
SN75472	1075472	–	Interface Daul Peripheral NAND	0.50
75491	1075491	14	4-Seg. MOS to LED Drvr.	2.45
75492	1075492	14	6 Dig. MOS to LED Cath. Drvr.	5.95
SN754410	10754410	16	Motor Driver IC	1.50
AY3-1015	10AY31015	40	UART 25K Baud	11.95
MC14495	1014495	14	7-Seg. Display Driver w/Latch	6.75
MC145406	10145406	16	Drve/Rcvr combo	1.75

ISD – SINGLE-CHIP VOICE RECORD / PLAYBACK IC

- 60 to 240 second duration @ 8KHz sampling rate
- Time duration can be increased at lower sampling rate
- Cascade for longer duration
- Easy-to-use single chip
- Microprocessor controllable or manual switch
- Fully addressable to handle multiple messages
- On chip clock source and automatic gain control (AGC)
- 2.4 to 55V operating voltage

Part No.	Description	1-9	10+
10ISD1760P	Voice Record/Playback (60 Sec.)	7.95	7.25
10ISD17120P	Voice Record/Playback (120 Sec)	12.95	12.50
10ISD17240P	Voice Record/Playback (240 Sec)	10.75	10.25

ELECTRONIC COMPONENT CABINET KITS

Each kit includes a 30-drawer component cabinet 11 1/4" x 12" x 6" and the most popular components in its category.

7400 Series IC Kit (330 pcs – 30 Types)

5 ea.	7450	7489	7490	74154	74174	74175
10 ea.	7402	7405	7410	7427	7414	7417
10 ea.	7420	7432	7447	7473	74151	74153
10 ea.	74157	7486	7493	74121	74123	74160
20 ea.	7400	7404	7406	7407	7408	7474

74LS Series IC Kit (420 pcs – 35 Types)

10 ea.	74LS05	74LS07	74LS10	74LS11	74LS14	74LS20	74LS30
10 ea.	74LS47	74LS73	74LS75	74LS76	74LS85	74LS86	74LS90
10 ea.	74LS93	74LS123	74LS125	74LS139	74LS151	74LS157	74LS174
10 ea.	74LS193	74LS240	74LS244	74LS245	74LS273	74LS373	74LS374
20 ea.	74LS00	74LS02	74LS04	74LS08	74LS32	74LS74	74LS138

CD4000 Series IC Kit (300 pcs – 25 Types)

10 ea.	CD4015	CD4016	CD4017	CD4020	CD4023
10 ea.	CD4024	CD4027	CD4040	CD4046	CD4050
10 ea.	CD4051	CD4069	CD4070	CD4071	CD4081
10 ea.	CD4093	CD4511	CD4538	CD4543	CD4566
20 ea.	CD4001	CD4011	CD4013	CD4049	CD4066

Linear Series IC Kit (375 pcs – 34 Types)

5 ea.	ULN2003A	LM10	NE5532	TL074CN	TL072CP	LM385Z1.2	LM567V
10 ea.	LM317T	78LO5	7815T	7912T	7905T	LM337T	7915T
10 ea.	LM339N	LM311N	LM556N	LM1458N	TL082CP	LF353N	LF356N
10 ea.	—	LF351N	LM318	LM386N-3	LM723CN	LM1488N	LM1489N
20 ea.	7805T	7812T	NE555V	LM741CN	LM358N	LM324N	LM336Z

Part No.	Description	Price
3200TTL	7400 Series IC kit	$175.90
3200TTLLS	74LS Series IC kit	125.50
3200CD	CD4000 Series IC kit	85.50
3200LIN	Linear Series IC kit	149.50

Content of cabinet component kits subject to slight change based on parts availability.

IC-DYNAMIC RAMS*

Part No.	Pins	Function	Prices
10 4116	16	16K x 1 200ns	$1.50
10 4164-10	16	64K x 1 100ns	2.25
10 41256-12	16	256K x 1 120ns	2.50
10 41256-10	16	256K x 100ns	2.50
10 41464-10	18	64K x 4 100ns	2.50
10 51100P	18	1M x 1 85ns	3.95
10 514256-10	20	256K x 4 100ns	4.75

STATIC RAMS*

Part No.	Pins	Function		Prices
10 2101	22	256 x 4	450ns	$2.50
10 2016	24	2048 x 8	150ns	1.49
10 2102	16	1024 x 1	450ns	0.69
10 2111	18	256 x 4	450ns	1.69
10 2112	16	256 x 4	450ns	3.50
10 2114	18	1024 x 4	450ns	1.75
10 6116	24	2048 x 8	200ns	1.95
10 6264-70	28	8192 x 8	70ns	2.75
10 6514	18	1024 x 4	450ns	3.95
10 6810	24	128 x 8	450ns	1.95
10 7489	16	16 x 4	50ns	2.90
10 74S189	16	16 x 4	35ns	2.75
10 DS1220Y	24	2K x 8	150ns	9.95
10 62256LP	28	32K x 8	85ns CMOS	4.49

RSR LINEAR IC TESTER

PORTABLE

MODEL LP2

- Easy to operate tester, specially designed for linear IC's (op-amps, comparators, opto, regulators, special function devices, transistor arrays).
- Light, compact, low power consumption (battery operated).
- **Average Search Time**: 0.8 seconds.
- **Display:** 16 characters in 1 line LCD
- **Test Pins**: 8 ~ 16 pins.
- **Test Voltage**: 5V
- Equipped with empty-load test. Auto Power Off.
- **Dimensions and Wt.**: 6.3 x 1.8" x 4.4"; 12 oz.

Part No. 01LP2 • Price: $795.00

RSR LINEAR IC TESTER

MODEL ICT-7A

- Reliable desktop design.
- 16 x 1 character 9 x 7 dot matrix LCD display.
- Built-in 6 functions and 10 numerical keys.
- Test Voltage: 5 ~ 24V
- Auto identifies the unknown ICs and lists the same function IC number.
- **Dimensions & Wt.**: 13" x 4" x 12"; 3.3 lbs.
- Test IC: Timer, Op Amp, Comparator, Regulator, Zener Diode, Photo Coupler, Driver, Communication IC, Switching Power Supply IC.

Part No. 01ICT-7A • Price: $2,500

IC-MICROPROCESSOR COMPONENTS

6500/6800 SERIES

Part No.	Pins	Function	Prices
10 6800	40	MPU 64K	6.95
10 6808	40	MPU/w Clock 64K	8.95
10 6821	40	Peripheral Interface Adapter	3.50
10 6840	28	Programmable Timer	2.49
10 6845	40	CRT Controller	2.95
10 6850	24	ACIA	2.95

8000 SERIES

Part No.	Pins	Function	Prices
10 8031	40	CPU/w 128 x 8 RAM I/O	$3.75
10 8051	40	MCU with 128 x 8 RAM	3.25
10 8080A	40	CPU-8-Bit	3.95
10 8085	40	CPU-8-Bit N-Channel	3.95
10 8088	40	CPU-16-Bit (8-Bit Data Bus)	3.59
10 8155	40	HMOS RAM I/O Port & Timer	4.49
10 8156	40	RAM with I/O Port & Timer	8.95
10 8185	18	Static RAM 1024 x 8	12.50
10 8212	24	8-Bit Input/Output	4.95
10 8216	16	Bi-Directional Bus Driver	1.75
10 8237	40	Prog. DMA Controller	1.95
10 8250	40	Asynchronous Communication Interface	4.40
10 8251	28	Programmable Communication Interface	2.75
10 8253	24	Programmable Internal Timer	3.25
10 8255	40	Programmable Peripheral I/O	3.59
10 82C55	40	Programmable Peripheral I/O	3.59
10 8259	28	Programmable Interrupt Controller	1.75
1082C79	40	Prog. Keyboard / Display / Interface	10.50
10 82C88	20	Bus Controller (CMOS)	2.50
10 8279	40	Programmable Keyboard/Display/Interface	11.50
10 8282	20	Octal Latch	6.35
10 82C82	20	Octal Latch	4.95
10 8284	18	Clock Generator/Driver	4.49
10 8286	20	Octal Bus Transceiver	1.75
10 8288	20	Bus Controller	3.59
10 8748	40	8-Bit Eprom RAM I/O	11.95
10 8755	40	2048 x 8 Eprom with I/O	9.95
10 Z80ACPU	40	8-Bit MPU 4 MHz	1.75
10 Z80ACTC	28	Counter Timer Circuit	1.75
10 Z80APIO	40	Parallel I/O Interface Controller	1.49

IC-EPROMS / EEPROMS*

Part No.	Pins	Functions	Prices
10 2716	24	2K x 8 450ns 25v	3.25
10 2732	24	4K x 8 450ns 25v	4.49
10 2764	28	8K x 8 250ns 21v	3.95
10 27C64	28	8K x 8 250ns 12.5v	2.95
10 27128	28	16K x 8 250ns 21v	5.39
10 27256	28	32K x 8 12.5v; 200ns	4.49
10 27C256	28	32K x 8 200ns 12.5v (CMOS)	3.59
10 27512	28	64K x 8 200ns 12.5v	4.95
10 27C512	28	64K x 8 250ns 12.5v (CMOS)	3.59
1027C101-10	32	128Kx8 100ns	5.30
10 27C010-12	32	128K x 8 120ns 12.5 (CMOS)	4.95
1027C040-10	32	512Kx8 100ns (12.5)	10.95
10 2864A	28	8K x 8 250ns EEPROM	6.05

* Check for current prices.

IC STORAGE TUBES

Part No.	Description	1-9	10-99	100+
0611ICST1	Plastic tube fits 8, 14, 16, 18, 20 Pin ICs	$0.35	$0.20	$0.12
0611ICST2	Plastic Tube fits 24, 28, 32, 40 Pin ICs	0.45	0.35	0.25
0611RS	Rubber Stop	0.07	0.06	0.04

VIZATEK PORTABLE DIGITAL IC TESTER

Best Value!

HAND-HELD UNIT

MODEL VZ4

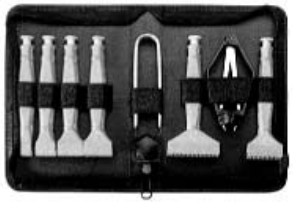
This unit will readily test TTL, CMOS series ICs.

- Supports the following: **TTL Series**: 7400, 74LS00 **CMOS Series** : CD4000, CD4500
- **Display**: 16 characters in 1 line LCD
- **Test Pins:** 14 to 24 pins
- **Power:** 9V battery *(included);*
- **Weight:** 1 lb.; **Size**: 6.3" x 4.3" x 1.8"

Part No.	Description	Price
01VZ4	Digital IC Tester, Portable	$225.00

IC INSERTION AND EXTRACTION TOOL KIT

9 PIECES



- Six IC insertion tools for: 8; 14/16; 18/20; 22; 24/28; and 32/40-pin ICs
- Universal extraction tool; PLCC IC extraction tool

Part No.	1-9	10+
3200CTK6	$15.95	$14.95

PROGRAMMER UNIVERSAL

- Low cost USB 2.0 with Windows support and low voltage capability
- Extremely portable
- Supports devices that include EPROMs, Flash, PIC, AVR GAL, CPLD, PEEL, PALCE, EPLD, Microcontrollers
- 48 pin zif socket with universal pin driver
- Accepts most compiler outputs in JDEC format including ABEL, CUPL, PALASM, TANGO PLD, OrCADPLD, PLD Designer and ISDATA
- Features test vector capability and multiarray fuse map editor
- Test TTL/CMOS logic IC's and DRAM devices
- Supports Windows Vista/XP/2000/NT/9X/ME
- Support Devices: 17,000+ ***(Model VP480)***; 7,000+ ***(Model VP280)***; 5,000+ ***(Model VP190)***
- Go to our website at ***http://www.elexp.com/tst_v190.htm*** for complete device support list
- Power adapter *(optional)*
- Dimensions: 166 x 98 x 23mm; Wt. 10 oz.

Part No.	Description	Price
01VP190	Model VP190	$195.00
01VP280	Model VP280	235.00
01VP480	Model VP480	445.00
16DVP	DC Voltage Adapter	15.00

BUG TRAYS

- Fits in Bug Cage
- Open tray or with 8 compartments

Part No.	Description	Price
03BTP	Open Bug Tray	$7.95
03BT10	Tray w/8 Compartments	7.95

BK PRECISION

UNIVERSAL PROGRAMMER

MODEL , 866C

Model 866

- Includes ZIF socket for DIP IC's. 48 pin ZIF
- Optional adapters available for PLCC, SOIC, TSOP, TQFP, SSOP, PSOP, QFP
- EPROM,EEPROM, Flash, NVRAM and serial EEPROM capability
- Connector for in-circuit programming

Part No.	Price
01BK866C	1095.00

CALL FOR PRICE QUOTE ON LARGER QTY.

SILICON RECTIFIERS

Part No.	Maximum Current (1A)	Maximum PIV (V)	1-9	10-99	100-999	1,000+
11 1N4001	1A	50	$0.10	$0.06	$0.04	$0.02
11 1N4002	1A	100	0.11	0.08	0.05	0.02
11 1N4004	1A	400	0.12	0.09	0.06	0.02
11 1N4007	1A	1,000	0.13	0.10	0.06	0.02
11 1N5400	3A	50	0.20	0.17	0.14	0.07
11 1N5401	3A	100	0.21	0.18	0.15	0.07
11 1N5402	3A	200	0.23	0.20	0.17	0.07
11 1N5404	3A	400	0.26	0.23	0.20	0.08
11 1N5406	3A	600	0.26	0.23	0.20	0.08
11 1N5408	3A	1,000	0.29	0.26	0.23	0.08
11 6A01	6A	100V	0.36	0.33	0.30	0.24
11 6A02	6A	200	0.38	0.35	0.32	0.26
11 6A04	6A	400	0.40	0.37	0.34	0.27
11 6A06	6A	600	0.44	0.41	0.38	0.28
11 6A08	6A	800	0.48	0.45	0.42	0.30
11 6A10	6A	1,000	0.51	0.48	0.45	0.30

BRIDGE RECTIFIERS

Fig. A

Fig. B

Fig. C

Fig. D

Fig. E

Part No.	Maximum Current (A)	Maximum Piv (V)	Fig.	1-9	10-99	100+
11 DB01	1.0A	100	A	$0.40	$0.30	$0.20
11 DB02	1.0A	200	A	0.40	0.30	0.20
11 DB04	1.0A	400	A	0.45	0.35	0.25
11 DB06	1.0A	600	A	0.45	0.35	0.25
11 W01	1.5A	100	B	0.35	0.25	0.20
11 W02	1.5A	200	B	0.35	0.25	0.20
11 W04	1.5A	400	B	0.40	0.30	0.25
11 W06	1.5A	600	B	0.42	0.32	0.27
11 RS401	4.0A	50	C	0.65	0.55	0.50
11 RS402	4.0A	100	C	0.70	0.60	0.55
11 RS404	4.0A	400	C	0.80	0.70	0.65
11 RS405	4.0A	600	C	0.80	0.70	0.65
11 RS406	4.0A	800	C	0.80	0.70	0.65
11 RS407	4.0A	1,000	C	0.80	0.70	0.65
11 TB81	8A	100	D	1.05	1.00	0.95
11 TB82	8A	200	D	1.05	1.00	0.95
11 TB84	8A	400	D	1.10	1.05	1.00
11 TB86	8A	600	D	1.20	1.15	1.10
11 TB151	15A	100	E	2.20	2.00	1.80
11 TB152	15A	200	E	2.25	2.05	1.85
11 TB154	15A	400	E	2.30	2.10	1.90
11 TB156	15A	600	E	2.35	2.15	1.95
11 TB251	25A	100	E	2.20	2.10	1.90
11 TB252	25A	200	E	2.25	2.15	2.05
11 TB254	25A	400	E	2.40	2.20	2.10
11 TB256	25A	600	E	2.45	2.25	2.15

ZENER DIODES

Part No.	Zener Vol. (V)	Wattage	1-9	10-99	100+
11 1N746	3.3	400mw	$0.15	$0.10	$0.06
11 1N748	3.9	400mw	0.15	0.10	0.06
11 1N751	5.1	400mw	0.15	0.10	0.06
11 1N753	6.2	400mw	0.15	0.10	0.06
11 1N754	6.8	400mw	0.15	0.10	0.06
11 1N757	9.1	400mw	0.15	0.10	0.06
11 1N758	10	400mw	0.15	0.10	0.06
11 1N759	12	400mw	0.15	0.10	0.06
11 1N4728	3.3	1w	0.20	0.15	0.08
11 1N4729	3.6	1w	0.20	0.15	0.08
11 1N4731	4.3	1w	0.20	0.15	0.08
11 1N4732	4.7	1w	0.20	0.15	0.08
11 1N4733	5.1	1w	0.20	0.15	0.08
11 1N4734	5.6	1w	0.20	0.15	0.08
11 1N4735	6.2	1w	0.20	0.15	0.08
11 1N4736	6.8	1w	0.20	0.15	0.08
11 1N4737	7.5	1w	0.20	0.15	0.08
11 1N4738	8.2	1w	0.20	0.15	0.08
11 1N4739	9.1	1w	0.20	0.15	0.08
11 1N4740	10	1w	0.20	0.15	0.08
11 1N4741	11	1w	0.20	0.15	0.08
11 1N4742	12	1w	0.20	0.15	0.08
11 1N4743	13	1w	0.20	0.15	0.08
11 1N4744	15	1w	0.20	0.15	0.08
11 1N4745	16	1w	0.20	0.15	0.08
11 1N4746	18	1w	0.20	0.15	0.08
11 1N4747	20	1w	0.20	0.15	0.08
11 1N4749	24	1w	0.20	0.15	0.08
11 1N4750	27	1w	0.20	0.15	0.08
11 1N4753	36	1w	0.25	0.20	0.15
11 1N4762	82	1w	0.25	0.20	0.15
11 1N4764	100v	1w	0.25	0.20	0.15
11 1N5225B	3.3	500mw	0.17	0.10	0.07
11 1N5228B	3.9	500mw	0.17	0.10	0.07
11 1N5230B	4.7	500mw	0.17	0.10	0.07
11 1N5231B	5.1	500mw	0.17	0.10	0.07
11 1N5234B	6.2	500mw	0.17	0.10	0.07
11 1N5237B	8.2	500mw	0.17	0.10	0.07
11 1N5239B	9.1	500mw	0.17	0.10	0.07
11 1N5240B	10	500mw	0.17	0.10	0.07
11 1N5242B	12	500mw	0.17	0.10	0.07
11 1N5245B	15	500mw	0.17	0.10	0.07
11 1N5333	3.3	5w	0.55	0.45	0.35
11 1N5338	5.1	5w	0.55	0.45	0.35
11 1N5341	6.2	5w	0.55	0.45	0.35
11 1N5343	8.2	5w	0.55	0.45	0.35
11 1N5346	9.1	5w	0.55	0.45	0.35
11 1N5347	10	5w	0.55	0.45	0.35
11 1N5349	12	5w	0.55	0.45	0.35
11 1N5352	15	5w	0.55	0.45	0.35
11 1N5355	18	5w	0.55	0.45	0.35
11 1N5357	20	5w	0.55	0.45	0.35
11 1N5359	24	5w	0.55	0.45	0.35
11 1N5363	30	5w	0.55	0.45	0.35

RECTIFIERS – FAST RECOVERY

Part No.	Maximum AS Current	Maximum Peak Reverse Volt	1-9	10+
111N4934	1A	100	0.14	0.12
111N4935	1A	200	0.14	0.12
11FR106	1A	800	0.20	0.16
11FR302	3A	100	0.35	0.30
11FR303	3A	200	0.40	0.35
11FR304	3A	400	0.55	0.50
11FR306	3A	800	0.65	0.60
11FR602	6A	100	0.95	0.90
11FR603	6A	200	1.10	1.00
11FR604	6A	400	1.20	1.15
11FR606	6A	800	1.30	1.25

DIODE KIT

Includes 10 each of:

1N914, 1N4148, 1N34, FR106, 1N4001, 1N4004, 1N4007, 1N5404, 1N5408, 1N751, 1N753, 1N4728, 1N4732, 1N4733, 1N4735, 1N4736, 1N4739, 1N4742, 1N4744, 1N4747, 1N5225, 1N5228, 1N5231, 1N5234, 1N5237

Includes 5 each of:

6A01, 6A08, DB01, DB04, RS401, RS404

TOTAL: 280 pcs.

Part No. 3200DDK • Price: $48.95

TRANSISTOR KIT

Includes total of 180 pcs. 15 different types of NPN, PNP transistors

- **30 ea of:** PN2222, 2N3904, 2N3906
- **10 ea of:** MPSA 13, 2N4401, 2N4403, PN2907, 2N2222A, 2N2907A
- **5 ea. of:** MPF102 FET, 2N3055, 2N5457 FET, TIP31A, TIP41A, TIP120

Part No. 3200TRANKIT • Price: $46.95

MISCELLANEOUS DIODES

Part No.	Description	1-9	10-99	100+
111N914	Switching Diode	$0.06	$0.05	$0.03
111N4148	Switching Diode	0.06	0.05	0.03
111N4149	Switching Diode	0.08	0.07	0.05
111N34	Ge Diode	0.45	0.40	0.35
111N60	Ge Diode	0.25	0.22	0.20
111N277	Ge Diode	0.90	0.85	0.80
111N457	Si Diode Gen	0.15	0.10	0.07
111N5817	Schottky Diode	0.25	0.20	0.15
111N816	Stabistor Diode	0.45	0.40	0.35
11MV2105	Varactor Diode (13-16 pf)	0.60	0.50	0.40
11MV2109	Varactor Diode (29-36 pf)	0.60	0.50	0.40
11MV104	Dual Varactor Diode (37-42 pf) (2.5-2.8 pf)	0.60	0.50	0.40
11FEP166TA	Dual Common Anode 16A Ultra Fast Rectifier – TO-220	1.05	0.95	0.89

HEAT SINKS

Fig. A

Fig. B

Fig. C

Fig. D

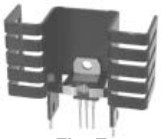


Fig. E

Fig. F

Part No.	Description	Fig.	1-9	10+
11HST220	For TO-220 Package	A	$0.35	$0.30
11HST220 LR	For TO-220 Large Size	A	0.45	0.40
11TO220HS	For TO-220; 25mm long; Heavy Duty	B	0.60	0.50
11TO220-CLIP	TO-220 Clip On	C	0.50	0.45
11HSDIP	For 14 & 16 Pin DIP Glue On	D	0.35	0.32
11HSTA	TO-220	E	0.40	0.35
11HST03	TO-3 Diamond Shape	F	1.60	1.50

HEAT SINK COMPOUNDS

Part No.	Description	Size	Price
2510-8180	Zinc Oxide filled silicon grease	6.5gms	$2.95
2510-8109	Zinc Oxide filled silicon grease	1 oz.	7.95
2510-8106	Zinc Oxide filled silicon grease & can	1 oz.	7.95
2510-8109	100% synthetic base non-silicon jar	16 oz.	38.95

BIPOLAR, FET, UJT, PUT

CASE STYLES:

TO-3

TO-18

TO-92

TO-202

TO-5

TO-39

TO-126

TO-220

For 1,000 + Call for Quote

Part No.	Description	Cross To ECG®	Case	1-9	10-99	100+
11 2N255	Ge, Hi-Power	-	TO-3	$1.75	$1.60	$1.50
11 2N404	PNP-GE RF/IF osc. MxR AM	100	TO-5	1.95	1.90	1.60
11 2N697	NPN-HI-SP-SW	128	TO-39	0.65	0.58	0.52
11 2N1302	NPN-GE RF/IF osc. MxR AM	101	TO-5	3.50	3.40	3.35
11 2N2102	NPN Gen. Purp.	128	TO-39	1.30	0.90	0.80
11 2N2160	Sil. UJT	6400B	TO-39	6.50	5.95	5.75
11 2N2192	NPN Gen. Purp.	128	TO-39	0.80	0.70	0.60
11 2N2219	NPN Gen. Purp.	128	TO-39	0.60	0.50	0.45
11 PN2222	NPN Gen. Purp. (plastic)	123AP	TO-92	0.13	0.10	0.06
11 2N2222A	NPN Gen. Purp.	123A	TO-18	0.40	0.35	0.30
11 2N2369	NPN, Switching	123A	TO-92	0.30	0.24	0.20
11 2N2431	Ge, PNP, Low Power	158		1.40	1.25	1.10
11 2N2646	Sil. UJT	6410	TO-18	2.75	2.50	2.25
11 2N2719	Si, RF, NPN	123A	TO-92	1.10	0.95	0.90
11 PN2905	PNP Gen. Purp.	159	TO-92	0.30	0.22	0.20
11 2N2905	PNP Gen. Purp.	129	TO-39	0.55	0.45	0.40
11 PN2907	PNP Gen. Purp.	159	TO-92	0.13	0.10	0.08
11 2N2907	PNP Gen. Purp.	159	TO-18	0.55	0.45	0.40
11 2N2926	Si, NPN, Low Power	289A	TO-92	0.25	0.20	0.18
11 2N3053	NPN Gen. Purp.	128	TO-39	0.65	0.60	0.55
11 2N3054	NPN Sil.Sw.	384	TO-66	2.50	2.20	1.80
11 2N3055	NPN NPN Pwr.	130	TO-3	0.95	0.85	0.80
11 2N3391	NPN Sil. Lo-Noise Hi-gain PA	199	TO-98	0.26	0.23	0.21
11 2N3392	PNP Sil. AF Pwr.	289A	TO-98	0.22	0.20	0.18
11 2N3393	PNP Sil. AF Pwr	289A	TO-98	0.26	0.23	0.21
11 2N3394	PNP Sil. AF Pwr.	289A	TO-98	0.22	0.20	0.18
11 2N3438	N Channel FET	312	TO-92	0.85	0.79	0.75
11 2N3440	NPN Hi-Volt	396	TO-39	0.90	0.85	0.80

Part No.	Description	Cross To ECG®	Case	1-9	10-99	100+
11 PN3638	PNP Sil. AF Preamp Dr.	159	TO-92	0.15	0.12	0.11
11 2N3638	PNP Sil. AF Preamp Dr.	159	R-110	1.75	1.65	1.50
11 2N3641	NPN Gen. Purp.	123A	TO-18	$0.35	$0.30	$0.25
11 PN3643	NPN, Si, General Purpose	-	-	0.12	0.10	0.09
11 2N3643	NPN Gen. Purp.	123A	TO-18	0.35	0.30	0.25
11 2N3702	Si, PNP, Low Power	290A	TO-92	0.14	0.11	0.10
11 2N3704	Si, NPN Low Power	85	TO-92	0.14	0.11	0.10
11 2N3819	FET N-Ch. Lo-Noise VHF/UHF A.	312	TO-92	0.60	0.55	0.45
11 2N3859	PNP Sil. AF Pwr.	289A	TO-98	0.27	0.24	0.22
11 2N3903	NPN Gen. Purp.	123AP	TO-92	0.16	0.13	0.09
11 2N3904	NPN Gen. Purp.	123AP	TO-92	0.12	0.10	0.06
11 2N3905	PNP Gen. Purp.	159	TO-92	0.12	0.10	0.08
11 2N3906	PNP Gen. Purp.	159	TO-92	0.12	0.10	0.06
11 2N4036	PNP Gen. Purp.	129	TO-39	0.85	0.65	0.59
11 2N4092	FET JFET N-Ch. Chopper/Sw.	466	TO-18	0.95	0.90	0.75
11 PN4121	PNP Gen. Purp.	159	TO-92	0.30	0.25	0.20
11 2N4124	NPN Gen. Purp.	123AP	TO-92	0.20	0.15	0.12
11 2N4125	PNP Gen. Purp.	159	TO-92	0.20	0.15	0.12
11 2N4126	PNP Gen. Purp.	159	TO-92	0.20	0.15	0.12
11 2N4237	NPN Power Sw.	128	TO-39	1.60	1.30	1.15
11 2N4351	FET Mosfet N-Ch. Enhance	465	TO-72	2.95	2.65	2.45
11 2N4355	PNP Gen. Purp.	159	TO-39	0.40	0.32	0.30
11 2N4400	NPN Gen. Purp.	123AP	TO-92	0.16	0.13	0.09
11 2N4401	NPN Gen. Purp.	123AP	TO-92	0.12	0.10	0.08
11 2N4402	PNP Gen. Purp.	159	TO-92	0.16	0.13	0.09
11 2N4403	PNP Gen. Purp.	159	TO-92	0.13	0.11	0.09
11 2N4404	PNP Gen. Purp.	129	TO-18	2.50	2.20	1.95
11 2N4416	JFET-N-Channel		TO-72	3.10	3.00	2.80

BIPOLAR, FET, UJT, PUT

For 1,000 + Call for Quote

Part No.	Description	Cross To ECG®	Case	1-9	10-99	100+
11 2N4870	Silicon UJT	6410	TO-92	$1.50	$1.25	$0.90
11 2N4871	Silicon UJT	6410	TO-92	1.50	1.25	0.90
11 PN4916	PNP Gen. Purp. (plastic)	159	TO-92	0.18	0.16	0.14
11 2N4916	PNP Gen. Purp.	159	TO-92	1.65	1.45	1.25
11 2N4921	NPN Si AF Power	184	TO-126	0.80	0.70	0.65
11 2N4922	NPN, Si, Power	184	TO-126	0.75	0.65	0.60
11 2N5086	PNP Gen. Purp.	159	TO-92	0.60	0.50	0.40
11 2N5088	NPN Low Noise	47	TO-92	0.12	0.10	0.09
11 2N5087	PNP Gen. Purp.	159	TO-92	0.70	0.60	0.50
11 2N5138	PNP Gen. Purp.	159	TO-92	0.15	0.12	0.10
11 2N5172	NPN Sil. AF Pwr.	289A	TO-92	0.15	0.12	0.10
11 2N5190	NPN Sil. AF Pwr.	184	TO-126	0.85	0.75	0.65
11 2N5191	NPN Sil. AF Pwr.	184	TO-184	0.54	0.45	0.43
11 2N5193	PNP Sil. AF Pwr.	185	TO-126	1.50	1.20	0.95
11 2N5224	NPN, Si, RF	123AP	TO-92	0.20	0.15	0.14
11 2N5248	FET N-Ch. Lo-Noise Amp	312	TO-92	0.65	0.60	0.55
11 2N5308	NPN Sil. Darlington Amp	172A	TO-92	0.25	0.20	0.18
11 2N5457	FET N-Ch. Amp Sw.	457	TO-92	0.80	0.75	0.65
11 2N5458	FET N-Ch. Amp Sw.	457	TO-92	0.80	0.75	0.65
11 2N5459	FET N-Ch. AF Amp/Chop/Sw.	459	TO-72	0.80	0.75	0.65
11 2N5460	FET P-Ch. AF Gen. Purp. Amp	326	TO-92	0.95	0.85	0.75
11 2N5461	FET P-Ch. AF Gen. Purp. Amp	326	TO-92	1.95	1.75	1.50
11 2N5462	FET P-Ch. AF Gen. Purp. Amp	326	TO-92	1.95	1.75	1.50
11 2N5484	FET N-Ch. Lo-Noise Amp	312	TO-92	0.70	0.60	0.55
11 2N5485	FET N-Ch. VHF Amp	451	TO-92	0.50	0.45	0.40
11 2N5551	NPN, Si, Lower Power	194	TO-92	0.25	0.18	0.16
11 2N5670	JFET, N Channel	-	-	0.40	0.35	0.33
11 2N5810	NPN Gen. Purp.	123AP	TO-92	0.70	0.65	0.60
11 2N5817	PNP General Purpose	159	TO-92	0.20	0.16	0.15
11 2N5831	NPN Sil. 300V Gen. Purp. Amp	287	TO-92	0.65	0.60	0.55
11 2N5951	FET N-Ch. RF Amp		TO-18	0.70	0.65	0.45
11 2N6004	NPN Sil. Low Pwr.		R-203	0.90	0.80	0.75
11 2N6027	Sil. Programmable UJT	6402	TO-92	0.40	0.35	0.30
11 2N6028	Sil. Programmable UJT	6402	TO-92	0.80	0.70	0.68
11 2N6034	PNP Darlington	254	TO-126	0.65	0.60	0.50
11 2N6037	NPN Darlington	253	TO-126	0.65	0.60	0.50
11 2N6106	PNP Sil. AF Pwr.	197	TO-220	1.05	0.95	0.90
11 2N6107	PNP Sil. AF Pwr.	197	TO-220	0.95	0.85	0.80
11 2N6121	NPN, Si, Power	-	TO-220	0.85	0.80	0.75
11 2N6124	PNP Sil. AF Pwr. Sw.	378	TO-220	0.85	0.80	0.75
11 3N204	MOSFET N-CH Dual Gate	222	TO-72	6.95	6.75	6.50
11 3N211	MOSFET N-CH Dual Gate	222	TO-72	6.95	6.75	6.50
11 BFR84	MOSFET N-CH Dual Gate	222	TO-72	6.95	6.75	6.25
11 BS170	MOSFET, N-CH, Enhance	490	TO-92	0.30	0.25	0.18
11 D40D4	NPN – Si Gen Purpose	210	TO-202	1.65	1.45	1.25
11 IRF511	EXFET N-Ch.		TO-220	$1.45	$1.35	$1.25
11 IRF620	EXFET N-Ch. Hi-Sp. Sw.	2388	TO-220	1.95	1.75	1.50
11 IRF621	EXFET N-Ch. Hi-Sp.Sw.	2388	TO-220	1.75	1.50	1.30
11 LM395	NPN Pwr.	-	TO-202	2.50	2.25	1.95
11 MBS4991	SBS Silicon Bilateral Switch	6403	TO-92	5.95	5.50	4.95
11 MFE121	MOSFET N-Ch. mosfet 2-Gate	222	TO-72	6.95	6.75	6.50
11 MJE181	NPN Hi-Pwr. Sw. Sil.	184	TO-126	0.70	0.60	0.58
11 MJE182	NPN, Si, Power	-	TO-126	0.65	0.55	0.52
11 MJE243	NPN-Hi-Pwr.	-	TO-126	1.35	1.30	1.25
11 MJE803	NPN Darlington	253	TO-126	0.50	0.45	0.40
11 MJE2955T	PNP-Sil. AF Pwr. Sw.	332	TO-220	0.80	0.70	0.60
11 MJE3055T	NPN-Sil. AF Pwr. Sw.	331	TO-220	0.60	0.55	0.50
11 MPF102	FET N-Ch. Lo-Noise Amp	312	TO-92	0.90	0.80	0.75
11 MPS3638	PNP-Sil. AF Preamp/Dryr.	159	TO-92	0.20	0.18	0.16
11 MPS6531	NPN-Gen. Purp.	123AP	TO-92	0.32	0.29	0.26
11 MPSA13	NPN Darlington Gen. Purp.	46	TO-92	0.25	0.19	0.16
11 MPSA14	NPN Darlington Gen. Purp.	46	TO-92	0.30	0.20	0.18
11 MPSA20	NPN Gen. Purp.	123AP	TO-92	0.18	0.12	0.11
11 MPSA42	NPN Gen. Purp.	287	TO-92	0.28	0.18	0.16
11 NSDU51	PNP Sil. AF Pwr. Sw.	211	TO-202	0.75	0.70	0.65
11 TIP111	NPN, Darlington	261	TO-220	0.60	0.55	0.52
11 TIP120	NPN Darlington	261	TO-220	0.60	0.55	0.45
11 TIP122	NPN Darlington	261	TO-220	0.60	0.45	0.43
11 TIP125	PNP, Si, Darlington	262	TO-220	0.65	0.60	0.58
11 TIP127	PNP, Si, Darlington	262	TO-220	0.65	0.60	0.58
11 TIP140	NPN Darlington	270	TO-218	1.55	1.45	1.30
11 TIP29	NPN Sil. Pwr. Sw. 40W	291	TO-220	0.45	0.35	0.30
11 TIP30	PNP Sil. Pwr. Sw. 40W	292	TO-220	0.45	0.40	0.35
11 TIP31	NPN Sil. Pwr. Sw. 40W	291	TO-220	0.49	0.40	0.35
11 TIP32	PNP Sil. Pwr. Sw. 40W	292	TO-220	0.49	0.40	0.36
11 TIP35C	NPN,Si, Power	392	TO-218	1.50	1.30	1.20
11 TIP36C	PNP,Si, Power	393	TO-218	1.50	1.30	1.20
11 TIP41	NPN, Si, Power	331	TO-220	0.60	0.50	0.45
11 TIP42	PNP Sil. AF Pwr. Sw.	332	TO-220	0.60	0.55	0.45
11 A1302	Hall Effect SW	—	TO-92	0.95	0.85	0.75
11 UGN3144	Hall Effect Sw Extra Sensitive		TO-92	0.90	0.80	0.70
11 UGN3503	Hall Effect SW.	—	TO-92	1.20	1.10	1.00
11 VN10KM	Power Mosfet	—	TO-92	0.65	0.60	0.55
11 VN300D	Power Mosfet	—	TO-220	1.95	1.75	1.65
11 ZTX458	NPN HV 400V 300mA	—	TO-92	0.65	0.55	0.50
11 ZTX1048A	NPN, High Gain, 3A	—	TO-92	1.50	1.10	0.70
11 ZTX1151A	PNP, High Gain, 3A	—	TO-92	1.20	0.90	0.60

SCR, TRIAC, DIAC

For 1,000 + Call For Quote.

Part No.	Description			Cross To ECG®	Case	1-9	10-99	100+
11 2N1595	SCR	200V	3A	5408	TO-5	$2.25	$2.10	$1.95
11 2N1596	SCR	200V	3A	5408	TO-5	2.95	2.75	2.50
11 2N1598	SCR	400V	3A	`5409	TO-5	5.95	5.50	4.95
11 2N5060	SCR	30V	0.8A	5400	TO-92	0.45	0.37	0.34
11 2N5061	SCR	60V	0.8A	5401	TO-92	0.48	0.39	0.36
11 2N5062	SCR	100V	0.8A	5402	TO-92	0.48	0.42	0.36
11 2N5064	SCR	200V	0.8A	5404	TO-92	0.45	0.38	0.35
11 2N5754	TRIAC	100V	2.5A	5640	TO-5	2.50	2.25	1.95
11 2N6070	TRIAC	100V	4A	5602	TO-126	1.25	0.95	0.90
11 2N6071	TRIAC	200V	4A	5603	TO-126	1.25	0.95	0.90
11 2N6072	TRIAC	400V	4A	5605	TO-126	1.25	0.95	0.90
11 2N6073	TRIAC	400V	4A	5605	TO-126	0.95	0.90	0.85
11 2N6075	TRIAC	600V	4A	5607	TO-126	1.05	0.95	0.90
11 2N6236	SCR	30V	4A	5411	TO-126	0.95	0.90	0.85
11 2N6239	SCR	200V	4A	5414	TO-126	0.95	0.90	0.85
11 2N6342	TRIAC	200V	15A	56004	TO-220	2.00	1.90	1.75
11 2N6346	TRIAC	200V	15A	56004	TO-220	2.25	1.95	1.75
11 2N6397	SCR	400V	8A	5554	TO-220	1.15	1.05	0.90
11 2N6401	SCR	100V	10A	5552	TO-220	2.10	1.95	1.80
11 C103B	SCR	200V	0.8A	5404	TO-92	0.90	0.85	0.75
11 C106B	SCR	200V	4A	5455	TO-126	0.65	0.55	0.45
11 C106D	SCR	400V	4A	5457	TO-126	0.65	0.55	0.50
11 C106F1	SCR	50V	4A	5453	MU-114	0.65	0.55	0.45
11 C107B1	SCR	100V	4A	5454	TO-202	0.70	0.65	0.60
11C122D	SCR	400V	8A	5465	TO-220	0.95	0.85	0.80
11 C203-YY	SCR	60V	0.8A	5401	TO-92	0.65	0.60	0.55
11 L401E5	TRIAC	400V	1A		TO-92	1.20	1.10	0.90
11 MAC97-1	TRIAC	200V	0.8A	5655	TO-92	0.60	0.55	0.45
11 Q200E3	TRIAC	200V	0.8A	5655	TO-92	0.80	0.70	0.60
11Q6010L5	TRIAC	600V	10A	5645	TO-220	2.15	1.95	1.85
11 S1001L	SCR	100V	2A	5417	TO-220	1.50	1.30	1.25
11 S4006L	SCR	400V	6A	5418	TO-220	2.30	2.00	1.90
11 SC136B	TRIAC	400V	4A	5629	TO-202	0.90	0.80	0.75
11 SC141B	TRIAC	200V	10A	56004	TO-220	1.25	1.15	1.00
11 SC141D	TRIAC	400V	10A	5635	TO-220	1.40	1.25	1.10
11 SC142B	TRIAC	200V	10A	5645	TO-220	0.95	0.85	0.75
11 SC142D	TRIAC	400V	10A	5645	TO-220	1.10	0.95	0.80
11 SC146B	TRIAC	200V	10A	5633	TO-220	1.40	1.25	1.15
11 SC92	TRIAC	400V	1A		TO-92	0.65	0.60	0.55
11 ST2	DIAC	32V	1mA	6408	DO-7	0.60	0.55	0.50
11 T106B1	SCR	200V	4A	5455	TO-202	0.85	080	0.75
11 T2800B	TRIAC	600V	10A	5645	TO-220	1.95	1.85	1.51

RSR EPROM ERASER

MODEL LER-121A

LER-121A LER-123A

- Professional performance, economic price
- Accommodates up to 12 EPROMS (24 pin)
- Built-in timer can be set for 0 – 60 minutes
- High quality, durable metal construction
- Powerful U-V tube with electronic starter, extends life of tube
- Auto shut-off switch when door is open prevents user from U-V exposure
- LED indicator for tube status (on/off)

MODEL LER-123A

- Larger size, 5 times the erasing area of ***Model LER-121A***
- Accommodates up to 64 pieces of EPROMs (24 pin)
- Suitable for production line.

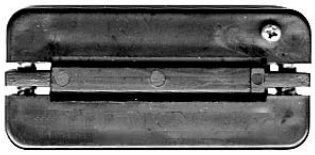
Part No.	Description	Price
01LER121A	Model LER-121A	$99.00
01LER123A	Model LER-123A	165.00

RSR ANTI-STATIC FOAM

Conductive antistatic foam material for bench or shipping ensures a safe work area.

Part No.	Size	1-9	10+
0302ASF	4" x 5"	$0.90	$0.80
0302ASF1	24" x 12"	9.20	8.30

IC PIN STRAIGHTENER



Straighten bent pins easily and safely.

- Straighten 8, 14, 16, 18, 20, 24, 28, 40, 48 pin ICs
- Size: 3.3" x 1.5" x 0.4"
- Color: black plastic
- Includes a ground terminal

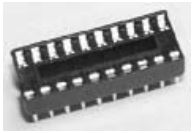
Part No.	1-9	10+
03ICS-01	$7.95	$7.70

Erem IC MAINTENANCE TOOL

- For straightening DIL/IC leads before insertion
- Ideal maintenance pliers

Part # 03ER808G • Price: $151.00

SOLDER TAIL LOW PROFILE



No. of Pins	Part No.	Lead Sp.	1-9	10+
8	19ICL08	0.03"	$0.10	$0.07
14	19ICL14	0.03"	0.10	0.08
16	19ICL16	0.03"	0.12	0.10
18	19ICL18	0.03"	0.15	0.10
20	19ICL20	0.03"	0.16	0.10
22	19ICL22	0.03"	0.18	0.15
24	19ICL24-W	0.06"	0.19	0.16
24	19ICL24-N	0.03"	0.19	0.16
28	19ICL28-W	0.06"	0.22	0.14
28	19ICL28-N	0.03"	0.22	0.14
40	19ICL40	0.06"	0.25	0.20

MACHINE TOOLED LOW PROFILE

No. of Pins	Part No.	1-9	10+
8	19ICM08	$0.55	$0.53
14	19ICM14	0.59	0.55
16	19ICM16	0.69	0.65
20	19ICM20	0.85	0.79
24	19ICM24	0.99	0.95
28	19ICM28	1.09	0.99
40	19ICM40	1.25	1.19

WIRE WRAP SOCKETS MACHINE TOOLED

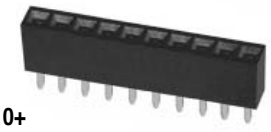
3 LEVEL

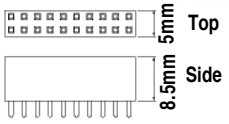
Part No.	No. of Pins	1-9	10+
19ICW08-M	8	$0.65	$0.60
19ICW14-M	14	1.20	1.10
19ICW16-M	16	1.25	1.10
19ICW18-M	18	1.40	1.30
19ICW20-M	20	1.60	1.50
19ICW24-M	24	1.90	1.80
19ICW28-M	28	2.30	2.10
19ICW40-M	40	2.75	2.50

FEMALE HEADER RECEPTACLES

.100" (2.5mm)

Top entry.





Part No.	No. of Contacts	No. of Rows	1-9	10+
240202SF	2	Single	$0.25	$0.20
240208SF	8	Single	0.50	0.45
240210SF	10	Single	0.70	0.65
240204DF	4	Dual	0.60	0.55
240208DF	8	Dual	0.75	0.70
240216DF	16	Dual	0.90	0.80
240220DF	20	Dual	1.05	0.90

TRANSISTOR SOCKETS

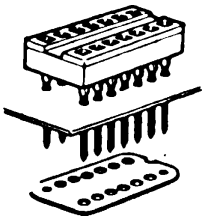
TO-5

TO-3

Part No.	Type	1-9	10+
19TS05	TO-5	$0.50	$0.40
19TS03	TO-3	0.90	0.80
19SIL3	Insulator Sil Pad for TO-3	0.20	0.18
19SIL220	Insulator Sil Pad for TO-220	0.20	0.16

I.D. TAGS FOR WIRE WRAP SOCKETS

Part No.	Description	Prices
19ID08	8 Pin ID (10 pak)	$3.50
19ID14	14 Pin ID (10 pak)	3.50
19ID18	18 Pin ID (05 pak)	3.50
19ID20	20 Pin ID (05 pak)	3.50
19ID22	22 Pin ID (05 pak)	3.50
19ID24	24 Pin ID (05 pak)	3.75
19ID28	28 Pin ID (05 pak)	3.50
19ID40	40 Pin ID (05 pak)	8.95



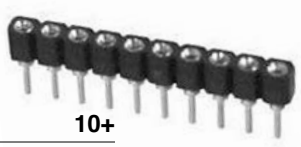
ZIF DIP SOCKETS AND RECEPTACLES

SOCKET

Part No.	Pin	Brand	Description	Price
19ZIF28ARIES	28	Aries	0.6" Lead Spacing	9.95
19ZIF28SPECIAL	28	Special	0.3" Lead Spacing	11.95
19ZIF40ARIES	40	Aries	0.6" Lead Spacing	19.95

SIP SOCKET

- 0.1" spacing
- May be cut to any length



Part No.	Description	1-9	10+
24SSF10	10 Pin Strip	$0.45	$0.40
24SSF36	36 Pin Strip	1.35	1.25
24SSW30	30 Pin Strip Wire Wrap Pins	1.90	1.70

PLCC SOCKETS

THROUGH HOLE

Part No.	Descr.	1-9	10+
19PLCC20	20 Pin	$0.59	$0.54
19PLCC28	28 Pin	0.59	0.54
19PLCC32	32 Pin	0.59	0.54
19PLCC44	44 Pin	0.66	0.60
19PLCC52	52 Pin	0.66	0.60
19PLCC68	68 Pin	0.66	0.60
19PLCC84	84 Pin	0.75	0.68

MOMENTARY SWITCHES

Fig. A

Fig. B

- 3A @ 125V AC
- Regular size
- Panel mount
- Normally open

Part No	Description	Fig.	1-9	10+
17MOMR1821A	Push-On, Push OFF	B	$0.85	$0.75
17MOMR1821B	Normally Open (Mom)	B	0.85	0.75
17MOMR1823A	Push On, Push-Off	A	0.85	0.75
17MOMR1823B	Normally Open (Mom)	A	0.85	0.75

MOMENTARY SWITCH
WITH 8" WIRES

- Panel mount
- Normally open
- Red Button

Part # 17MOMWRNO • Price: $0.95

PUSHBUTTON / ALTERNATE ACTION
PUSH-ON, PUSH-OFF

With epoxy seal.

Part No.	Description	1-9	10+
17L8601	SPDT	$2.25	$1.95
17L8602	DPDT	2.75	2.50

TACT MOMENTARY SWITCHES 6MM/12MM

- Black color
- 3.5mm body height

Part No.	Description	1-9	10+
17DTS62K	6mm, 1.5mm button height	$0.25	$0.20
17DTS63K	6mm, 3.5mm button height	0.25	0.20
17DTS83K	12mm, 5mm button height	0.25	0.20

ILLUMINATED TACT SWITCHES

Fig. A

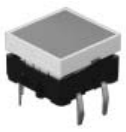


Fig. B

- **Contact Rating:** 50mA @ 12VDC
- **LED Ratiing:** 30mA @ 5V
- Black housing

Part No	Description	Fig.	1-9	10+
17SPL6R	Red Led / Red Cap	A	$1.30	$1.20
17SPL6G	Green LED / Red Cap	A	1.20	1.10
17SPL12WR	Red LED / White Cap	B	1.75	1.65
17SPL12WG	Green LED / White Cap	B	1.75	1.65

MOMENTARY SWITCHES

Fig. A

Fig. B

Fig. C

Fig. D

Fig. E

Fig. F

Fig. G

Fig. H

Part No.	Description	Fig.	1-9	10+
17MOMNO	Normally Open Red	A	$0.55	$0.40
17MOMNO-BK	Normally Open Black	A	0.55	0.40
17MOMNC	Normally Closed Black	A	0.80	0.70
17MOMMS402	N.O., High Quality, Red	B	0.80	0.75
17MOMTS32	N.O., High Quality, Black	B	0.75	0.65
17MOMSKPDA	N.O.,Long PC Leads	C	0.55	.50
17MOMDS660	Normally open	D	2.25	2.05
17MOM803	SPST – Black	E	0.85	0.70
17MOM803RD	SPST – Red	E	0.85	0.70
17MOMTS22A	SPDT Rt.Angle PC Leads	F	1.65	1.50
17TP11CG-PC-2	SPST NO	G	2.05	1.80
17TP11FG-PC-2	SPDT Mom	G	2.25	2.05
17TOGMOMSD	SPDT – Mom.	H	1.55	1.35
17TOGMOMDS8014A	SPDT – Mom. Center Off	H	1.60	1.40
17TOGMOMDD8012A	DPDT – Mom. Center Off	G	1.80	1.70

SWITCHES MOMENTARY PUSHBUTTON
SNAP-ACTING

Part No.	Type	Termi-nation Current		1-9	10+
17MOMT80P8701B	SPDT	ON-(ON)	Solder	$2.35	$2.00
17MOMT80P8701C	SPDT	ON-(ON)	PC Lead	2.35	2.00
17MOMT80P8702B	DPDT	ON-(ON)	Solder	3.30	2.90
17MOMT80P8702C	DPDT	ON-(ON)	PC Lead	3.30	2.90

ILLUMINATED PUSHBUTTONS

Miniature, DIP package SPDT switches. Available with (2), (1), or no LED's. Two LED version contains one each red and green LED. Smooth travel with distinct click. Varied cover colors.

- SPDT. Body Dimensions: $^{11}/_{16}$ x $^{1}/_{2}$"
- 24VDC 50 mA (min. 1 A current acceptable)
- Initial contact resistance: 20mΩ max (AC 200 V, 5mA)
- Static capacity 1.5 pt max (1 MHz)

Part No.	Description	1-9	10+
17PBA12	Yellow Cover, No LED	$1.70	$1.50
17PBA291	Grey Cover, Red LED	1.95	1.75
17PBA2103	Transparent Cover, Green LED	1.95	1.75
17PBA313	Green Cover, 1 Each Red and Green LED	2.15	1.95
17PBA31023	Transparent Cover, Yellow and Green LED	2.15	1.95

RSR MINI AND STANDARD SLIDES

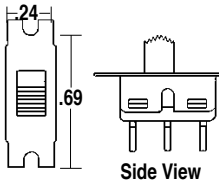
Mini

Standard

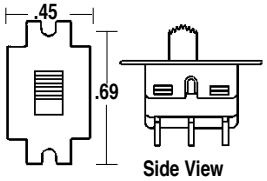
H251

Part No.	Description	1-9	10+
17SLDSS	SPST-mini	$0.40	$0.35
17SLDSD	SPDT-mini	0.40	0.35
17SLDDD	DPDT-mini	0.45	0.40
17SLD650	SPDT – MINI – PC Leads	0.40	0.35
17SLDDDPC	DPDT – Mini – PC Leads	0.45	0.40
17SLDH251	SPDT– .1" center fits breadboards	1.30	1.20
17SLD1035000	SPDT – PC Leads .1" Center, Sub Mini	1.40	1.30
17SLDSDL	SPDT-standard	0.40	0.35
17SLDSDL-CTR	SPDT - Standard Center Off	0.45	0.40
17SLDDDL	DPDT-standard	0.48	0.42

RSR MINI SLIDE – HIGH QUALITY



Side View
Fig. A



Side View
Fig. B

5A @ 120VAC or 28VDC

Part No	Description	Fig.	1-9	10+
17TS13B	SPDT – Solder Lug	A	$1.10	$0.90
17TS13C	SPDT – PC Leads	A	1.10	0.90
17TS14B	SPDT Center Off – Solder Lug	A	1.10	1.00
17TS14C	SPDT Center Off – PC Leads	A	1.10	1.00
17TS11C	DPDT – PC Leads	B	1.20	1.10

RSR TOGGLE SWITCH WITH WIRES

SPST; 6" LONG 18AWG

- 8A @ 125V

Part # 17SWTOGWR • Price: $0.95

SUBMINI HI-RELIABILITY

Part No.	Descr.	1-9	10+
17TOGMS245	DPDT	2.10	1.90

ROTARY SWITCHES

NON-SHORTING

(BREAK BEFORE MAKE)

Fig. A
Regular Shaft

Fig. B
Knurled Shaft

Part No.	Poles	Positions	Fig.	1-9	10+
17ROT2-6	2	6	A	$2.50	$2.30
17ROT3-4	3	4	A	2.50	2.30
17ROT6-2	6	2	A	2.50	2.30
17ROT2-5-C	2	5	B	2.50	2.30
17ROT4-3-C	4	3	B	2.50	2.30

RSR TOGGLES

MINIATURE

Part No.	Description	1-9	10+
17TOGSS-M	SPST	$1.35	$1.15
17TOGSD-M	SPDT	1.40	1.20
17TOGSDC-M	SPDT-center off	1.45	1.35
17TOGMOMSD	SPDT-momentary	1.55	1.35
17TOGMOMDS8014A	SPDT – Mom. Center Off	1.60	1.40
17TOGDD-M	DPDT	1.55	1.35
17TOGDDC-M	DPDT-center off	1.75	1.55
17TOGMOMDD8012A	DPDT – Mom. Center Off	1.80	1.70
17TOGSDPC-M	SPDT – PC Mount	1.40	1.20
17TOGDDPC-M	DPDT – PC Mount	1.55	1.35

MINIATURE SEALED

5A @ 120VAC or 28VDC

Part No.	Description	1-9	10+
17TOGE8013	SPDT	$1.55	$1.40
17TOGE8014	SPDT – Center Off	1.60	1.50
17TOGE8011	DPDT	1.70	1.60
17TOGE8012	DPDT – Center Off	1.95	1.85

STANDARD

with solder lug

with screw terminals

Part No.	Description	1-9	10-99	100+
17TOGSS	SPST	$1.15	$0.90	$0.75
17TOGSD	SPDT	1.20	1.00	0.85
17TOGSD103	SPDT-Center off	1.30	1.10	0.95
17TOGDD	DPDT	1.40	1.20	1.00
17TOGSDSR	SPDT Screw Term.	1.30	1.10	0.75
17TOGDDSR	DPDT Screw Term.	1.60	1.40	1.20

TOGGLE MINI – ECONOMY TYPE

Part No.	Description	1-9	10+
17TOGMTS101SL	SPST – Solder Leads	$0.70	0.60
17TOGMTS101PC	SPST – PC Leads	0.70	0.60
17TOGMTS102SL	SPDT – Solder Leads	0.70	0.60
17TOGMTS102PC	SPDT – PC Leads	0.70	0.60
17TOGMTS103PC	SPDT – Center Off; PC Leads	0.75	0.65
17TOGMTS202SL	DPDT – Solder Leads	0.80	0.70
17TOGMTS202PC	DPDT – PC leads	0.80	0.70

MINIATURE-HI-RELIABILITY

Part No.	Description	1-9	10+
17TOGMS500PB	4PDT	3.95	3.45

SWITCHES

LIMIT / SNAP SWITCHES

SPDT: 5A rating
@ 250Vac

Fig A Fig B Fig C

Part No.	Description	Fig	1-9	10+
1700LM10	Micro, 35gf, Solder Leads	A	$1.65	$1.50
1700LM30	Micro, 40gf, PC Leads	B	1.65	1.50
1700LM20	Mini, 80gf, Terminals	C	1.85	1.70

TILT SWITCHES

Part No.	Description	1-9	10+
1700TLRB	Rollerball, metal case; 15	0.95	0.90

KEYPAD – 16 BUTTON
4 X 4 MATRIX

- ***Comes complete with .1" spacing header output for easy fit into breadboards.***
- Matrix code pin-out comes with unit.
- 3" x 2.8" x 0.6"
- 1,000,000 life cycles per key.
- 20mA, 24VDC contact rating. 200Ω max contact resistance.
- Black with white keys.

Part No.	1-9	10+
17KP1604	$6.25	$5.75

KEYPAD – 12 BUTTON

Single pole / common bus.

- **.1" spacing header output for easy fit into breadboards.**
- 3 x 4 style – 12 keys.
- Black with white keys.

Part No.	1-9	10+
1700KP	$6.50	$4.90

MAGNETIC REED SWITCH

Part No.	Descr.	1-9	10-99	100+
1700RD	SPST	$1.15	$0.90	$0.75

MAGNETIC SWITCH

Ideal for burglar alarm systems. Can be used in normally open or normally close loop. Operating gap 3cm Max.

Part No.	1-9	10+
17MAGSW	$4.50	$4.25

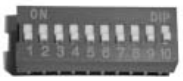
LIGHTED ROCKER SWITCH

Part No.	1-9	10-99	100+
1700LKR	$1.75	$1.50	$1.25

DIP SWITCHES

4 Switches, 8-Pin DIP

8 Switches, 16-Pin DIP



Part No.	Style	Description	1-9	10+
17DIP2SS	SPST	2 Switches, 4-Pin Dip	0.60	0.50
17DIP4SS	SPST	4 Switches, 8-Pin Dip	$0.80	$0.65
17DIP8SS	SPST	8 Switches, 16-Pin Dip	0.90	0.85
17DIP9SS	SPST	9 Switches, 18-PinDip	0.45	0.40
17DIP10SS	SPST	10 Switches, 20 Pin Dip	1.25	1.10
17DIP12SS	SPST	12 Switches, 24-Pin Dip	1.50	1.35

DIP SWITCHES
SPDT TYPE

Fig. A

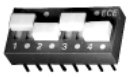


Fig. B

Part No.	Fig.	Description	1-9	10+
17DIP4SDGRE	A	4 Switches, 16-Pin Dip (Greyhill)	3.50	3.25
17DIP4SD	B	4 Switches, 16-Pin Dip	2.50	2.35

DIP SWITCH TRI-STATE

With three states (1, open, 0) setting function, especially suitable for encoding/decoding of Tri-State encoder/decoder IC to obtain more security codes. Ideal for coding of telecommunication, transceiving, remote control and burglar alarm systems.

Part No.	No of positions	1-9	10+
17DIPSS8TRI	8	$1.75	$1.50

MINIATURE BINARY-CODED SWITCHES

Part No.	Circuit	Code	1-9	10+
17BCDR	Binary Coded Decimal	Real	$3.95	$3.50
17BCDC	Binary Coded Decimal	Comp.	3.95	3.50
17BCHR	Binary Coded Hex	Real	3.95	3.75
17BCHC	Binary Coded Hex	Comp.	3.95	3.50

KNIFE SWITCHES

SPDT or DPDT with small binding posts for easy access to all positions.

SPDT

DPDT

Part No.	1-9	10+
17KSSPDT	$1.75	$1.50
17KSDPDT	2.25	1.95

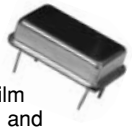
KEYLOCK SWITCH

Part No.	Price
1700KY	$5.95

CRYSTALS

Part No.	Freq. (MHz)	Case	1-9	10+
12C1M	1.000	HC 33	$5.05	$4.85
12C1.84M	1.843	HC 33	2.50	1.95
12C2M	2.000	HC 33	2.50	1.95
12C3.28M	3.276	HC18	1.19	0.89
12C3.58M	3.579	HC 18	1.09	0.89
12C3.68M	3.686	HC 18	1.09	0.89
12C4M	4.000	HC 18	1.09	0.89
12C4.91M	4.915	HC 18	1.09	0.89
12C5.06M	5.06	HC 18	1.09	0.89
12C6M	6.000	HC 18	1.09	0.89
12C6.14M	6.144	HC 18	1.09	0.89
12C6.55M	6.553	HC 18	0.85	0.80
12C8.0M	8.000	HC 18	1.09	0.89
12C10M	10.000	HC 18	1.09	0.89
12C14.31M	14.318	HC 18	1.09	0.89

CRYSTAL CLOCK OSCILLATORS



A single component oscillator using a combination of thick film and quartz crystal technology. Suitable for use in computer and digital equipment. Frequency stability 100ppm. Input voltage 5V. All oscillators fit into standard 14-pin DIP socket.

Part No	Frequency	1-9	10+
12OSC1	1.0000 MHz	$2.45	$2.20
12OSC1.84	1.8432 MHz	2.45	2.25
12OSC2	2.0000 MHz	2.45	2.20
12OSC4	4.0000 MHz	1.95	1.70
12OSC5.06	5.0688 MHz	1.95	1.70
12OSC6	6.0000 MHz	1.95	1.70
12OSC6.14	6.144 MHz	2.95	2.75
12OSC8	8.0000 MHz	2.69	2.51
12OSC10	10.00 MHz	1.95	1.70
12OSC12	12.00 MHz	1.95	1.70
12OSC16	16.00 MHz	1.95	1.70
12OSC20	20.00 MHz	1.95	1.70
12OSC25	25.00 MHz	1.95	1.70
12OSC32	32.00 MHz	1.95	1.70
12OSC33	33.00 MHz	2.45	2.25

THERMISTORS (NTC TYPE)

Part No.	R @ 25C	1-9	10-99	100+
21T100	100	$0.65	$0.55	$0.44
21T300	300	0.65	0.55	0.44
21T1K	1K	0.65	0.55	0.44
21T5K	5K	0.65	0.55	0.44
21T10K	10K	0.65	0.55	0.44
21T50K	50K	0.65	0.55	0.44
21T100K	100K	0.65	0.55	0.44

RELAYS - AUTOMOBILE & WIRE HARNESS

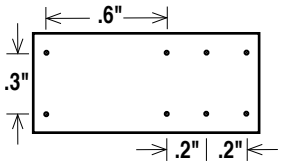
Part No.	Description	1-9	10+
22KAR1240	12 V DC @ 40 A	**$2.50**	**$2.20**
22KAR1260	12 V DC @ 60 A	**2.95**	**2.65**
22KAR2480	24 V DC @ 80 A	**3.50**	**3.20**
22KARSOCK	Relay Socket W/Leads	**2.20**	**1.95**

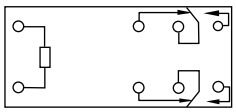
RELAY – DIP

- Suitable for handling low signals in computer peripherals, telecomunications and security equipment
- Standard DIP Package.
- Coil arrangement: 2 FORM C (DPDT).
- Capable of Switching Loads up to 2A.

Part No.	Nominal Coil Voltage	Coil Resistance +20%	1-9	10+
22RZ5	5	45	$2.95	$2.25
22RZ12	12	280	2.50	1.90
22RZ24	24	1.1K	2.95	2.25

RELAY – CLEAR CASE – DIP



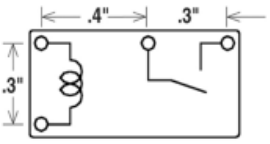


Bottom View

- **Clear Case** – Makes it easier to understand contact movement
- **Standard DIP Package** – fits in breadboard
- **Coil Arrangement:** 2 Form C (DPDT)
- Capable of switching loads up to 5A

Part No.	Nominal Coil Voltage	Coil Resistance	1-9	10+
22RCLR5V	5V	50	$2.95	$2.50
22RCLR12V	12V	270	2.95	2.50

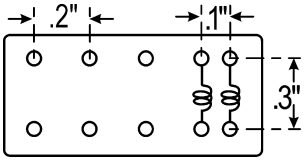
RELAY SPST
12V @ 10A



- Sensitive 10A relay
- **Applications:** Home appliances, fan control, timer etc.
- 12V coil; coil resistance 720 ohm

Part No.	1-9	10+
22RG5Q1DC12	$2.25	$1.95

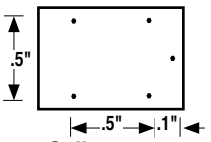
RELAY – DIP
LATCHING, 5V



- Standard DIP Package
- Capable of switching loads up to 2A

Part No.	Nominal Coil Voltage	Coil Resistance +20%	1-9	10+
22RLTR5	5	45	$3.95	$3.50

RELAY SPDT
6V/12V @ 8A



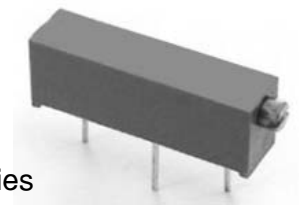
Part No.	Normal Voltage	Normal Coil Resistance	Coil 1-9	10+
22RP6	6V	60	$1.75	1.50
22RP12	12V	400	$1.75	$1.50

RELAY REED

- High switching speed.
- Low power consumtion.
- Low bounce time -.5m sec max.
- Low contact resistance - 150 m OHM.
- Max carry current - 1A.
- Coil Arrangement: 1 FORM A (SPST) Normally open.

Part No.	Nominal Coil Voltage	Coil Resistance	1-9	10+
22RD5	5	500	$1.60	$1.30
22RD12	12	1050	1.60	1.30
22RD24	24	2080	1.60	1.30

MULTITURN POTENTIOMETERS



Multiturn: 15 turn
Cross to: BI – 89 Series
Bourns – 3006P Series
Spectrol – 43P Series
Vishay – T18 Series

Values: 100 ohm, 200 ohm, 500 ohm, 1K ohm, 2K ohm, 5K ohm, 10K ohm, 20K ohm, 50K ohm, 100K ohm, 500K ohm, 1M ohm, 2M ohm

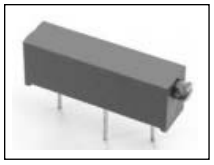
Part No.	1-9	10-99	100+
18MTT value	$0.75	$0.60	$0.45

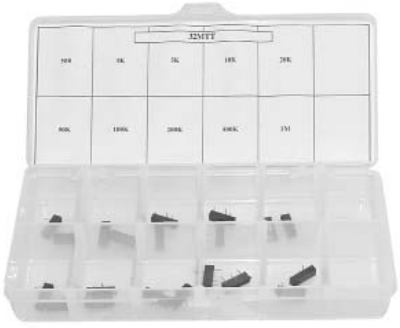
MULTITURN POTENTIOMETER
WITH KNOB, 15 TURN

Values: 500, 1K, 5K, 10K, 50K, 100K, 500K, 1M

Part No.	1-9	10+
18MTK value	$1.75	$1.50

MULTITURN POTENTIOMETER KIT

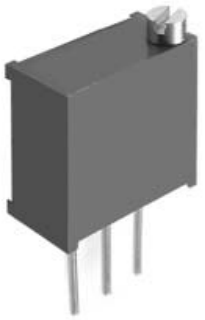




Assortment of 10 different values from 100 to 1M. Total of 20 pieces (18MTT type) in a plastic box with dividers.

Part No. 32MTT • Price: $15.95

MULTITURN POTENTIOMETER
TOP ADJUST, 25 TURNS, 3/8" SQ



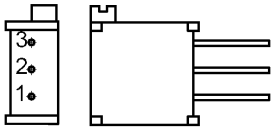
3/8" (9mm) SQ, cermet
Cross to: BI – 63 Series
Bourns – 3296W Series
Spectrol – 64 Series
Vishay – T93 Series

Values: 500 ohm, 1K ohm, 2K ohm, 5K ohm, 10K ohm, 20K ohm, 50K ohm, 100K ohm, 500K ohm, 1M ohm

Part No.	1-9	10+
18MPT value	$0.65	$0.50

POTENTIOMETER MULTITURN
SIDE ADJUST (VERTICAL), 25 TURN

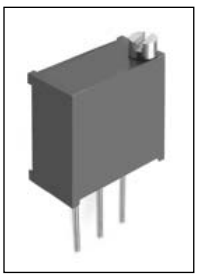
3/8" (9mm) square, cermet.
Cross to: BI 63 Series
Bourn's – 3296 X Series
Spectrol – 64 Series
Vishay – T93 Series

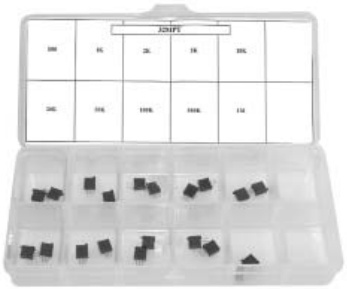


Values *(In Ohms):* 1K; 5K; 10K; 50K; 100K

Part No.	1-9	10+
18MPV value	$0.65	$0.50

MULTITURN POTENTIOMETER KIT



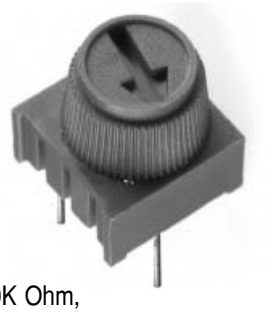


Assortment of 10 different values from 500 to 1M. Total of 20 pieces in a plastic box with dividers.

Part No. 32MPT • Price: $17.95

POTENTIOMETER

IDEAL FOR BREADBOARDING



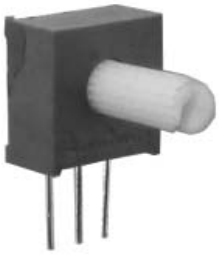
- Cermet; 1/2W
- Wire pin leads, 0.1" spacing
- Single turn with knob

Values: 500 Ohm, 1K Ohm, 5K Ohm, 10K Ohm, 50K Ohm, 100K Ohm, 500K Ohm, 1M Ohm

Part No.	1-9	10-99	100+
18STX value	$0.90	$0.80	$0.70

POTENTIOMETER

CERMET



- Ideal for breadboarding
- Wire pin leads, 0.1" spacing
- Single turn with shaft

Value: 1K, 5K, 10K, 50K, 100K, 500K, 1M Ohm

Part No.	1-9	10-99	100+
18STW value	$0.85	$0.75	$0.65

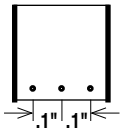
CERMET: SINGLE TURN, 3/8" SQ

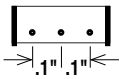
Fig. A

Fig. B

Cross to:
BI – 72 Series;
Bourns – 3386 Series;
Spectrol – 63 Series;
Vishay – T20 Series

Value: 100 ohm, 200 ohm, 500 ohm, 1K ohm, 2K ohm, 5K ohm, 10K ohm, 20K ohm, 50K ohm, 100K ohm, 500K ohm, 1M ohm





In Line Leads 0.1" Spacing

Part No.	Description	Fig.	1-9	10-99	100+
18CPH value	Top Adjust	A	$0.60	$0.45	$0.35
18CPV value	Side Adjust	B	0.60	0.45	0.35

CERMET POTENTIOMETER KIT

3/8" SQ

Assortment of 10 different values from 500 to 1M. Total of 20 pieces in a plastic box with dividers.

Fig. A

Fig. B

Part No.	Description	Fig.	Price
32CSP1	Horizontal 3/8"	A	$14.95
32CSP2	Vertical 3/8"	B	14.95

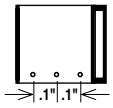
POTENTIOMETERS

IDEAL FOR BREADBOARDING

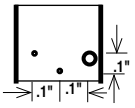
- Cermet; 1/2W
- Wire pin leads, 0.1" spacing
- Single turn with shaft

STS Values: 100 Ohm, 200 Ohm, 500 Ohm, 1K Ohm, 2K Ohm, 5K Ohm, 10K Ohm, 25K Ohm, 50K Ohm, 100K Ohm, 500K Ohm, 1M Ohm, 2M Ohm

STY Values: 500 Ohm, 1K Ohm, 5K Ohm, 10K Ohm, 25 K Ohm, 50K Ohm, 100K Ohm, 500K Ohm, 1M Ohm, 5M Ohm



STS



STY

Part No.	1-9	10-99	100+
18STS value	$0.90	$0.80	$0.70
18STY value	0.90	0.80	0.70

CERMET: POTENTIOMETER KIT

WITH SHAFT

Assortment of 10 different values from 500 ohms to 1M ohms. Total of 20 pieces (18STS or 18STY type) in a plastic box.

Part No.	Price
32STS	$16.95
32STY	$16.95

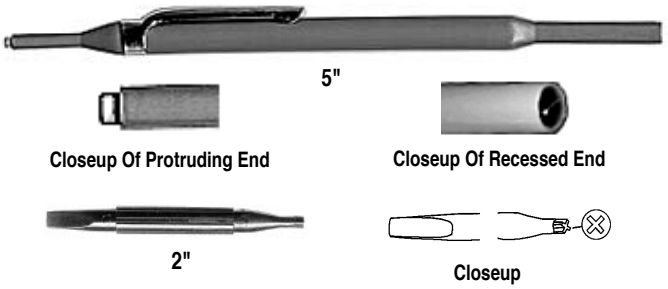
CERMET: POTENTIOMETER KIT

WITH KNOB

Assortment of 8 different values from 500 ohms to 1M ohms. Total of 20 pieces (18STX type) in a plastic box.

Part No.	Price
32STX	$16.95

MINIATURE POTENTIOMETER – TRIMMER TOOLS

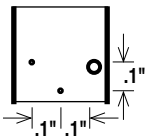


Part No.	Size	Price
1538608	5"	$1.30
153PF903	2"	0.40

CERMET: SINGLE TURN 3/8" SQ – TOP ADJUST

Cross to:
BI – 72 Series;
Bourns – 3386P

Value: 100 ohm, 200 ohm, 500 ohm, 1K ohm, 2K ohm, 5K ohm, 10K ohm, 20K ohm, 50K ohm, 100K ohm, 200K ohm, 500K ohm, 1M ohm



Part No.	1-9	10-99	100+
18CPY value	$0.60	$0.45	$0.35

POTENTIOMETER CERMET

SINGLE TURN, 1/4" SQUARE

- Miniature package
- Cross to Bourn's 3362

Values *(In Ohms):*

Horiz. : 1K; 2K; 5K; 10K; 50K; 100K; 500K

Vert. : 1K; 5K; 10K; 50K; 100K; 500K

Fig. A

Fig. B

Part No.	Description	Fig.	1-9	10-99	100+
18CSH value	Top Adjust (Horizontal)	A	$0.55	$0.45	$0.35
18CSV value	Side Adjust (Vertical)	B	0.55	0.45	0.35

POTENTIOMETER CERMET

SINGLE TURN, 1/4" ROUND

Cross to Bourn's 3329, BI 82 Series

Values *(In Ohms):*
1K; 5K; 10K; 50K; 100K

Part No.	1-9	10+
18CST value	$0.65	$0.55

DESIGNER POTENTIOMETER KIT

23 POPULAR TRIMMERS AND POTS

More than 15% savings over our already, low, every-day pricing. Fantastic assortment from our regular inventory, not surplus. A great way to try our most popular types of trimpots and potentiometers before ordering in quantity. Also a good way to get a nice prototyping supply very economically. Perfect for the classroom. Commonly used values and wide range of styles. Includes Precision (multi-turn) Trimpots, panel mount pots, breadboard compatible trimmers, cermets and more. Complete range of standard, commonly used values. Your option on packaging can further save money. Available in a ziplock bag, or for a few dollars more in a durable, adjustable polypropylene component storage case.

KIT INCLUDES:

(2 each) 1K panel mount, serrated shaft, solder lug leads 1/2W
(2 each) 10K panel mount, serrated shaft, solder lug leads 1/2W
(2 each) 100K panel mount, smooth shaft, solder lug leads 1/2W
(2 each) 1M panel mount, smooth shaft, solder lug leads 1/2W
(2 each) 2M panel mount, smooth shaft, solder lug leads 1/2W
(2 each) 500K panel / PC leads, .6" body diameter, 1/4W
(1 each, 4 values) 100 ohm, 200 ohm, 500 ohm, 100K breadboard compatible "STS"
(1 each, 4 values) 1K, 5K, 10K, 50K breadboard compatible "STY" 1/2W
(1 each) 2K single turn cermet horizontal mount 3/8" square
(1 each) 20K single turn cermet vertical mount 3/8" square
(1 each) 1M "STX" (wider knob) breadboard compatible 1/2W
(1 each) 50K side mount (right angle adjust) breadboard compatible "STW" 1/2W
(1 each) 200 ohm 15 turn precision rectangular "MTT" series
(1 each) 1K precision, 15 turn with adjuster knob "MTK" series
(1 each) 10K precision, 25 turn 3/8" square vertical mount, top adjust
(1 each) 50K precision, 25 turn 3/18" square vertical mount, side adjust
(1 each) 100K precision, 25 turn 3/18" square vertical mount, side adjust

In the rare event we are temporarily out of a part when we do our production run, we will replace it with a similar Pot of equal or greater value

Part No.	Description	Price
32POTBAG	20 piece pot ass't. in ziplock bag	$18.95
32POTCASE	20 piece pot ass't in component storage case	22.25

CERMET:

SINGLE TURN, WITH THUMB WHEEL

Cross to: BI – 91 Series
Bourns – 3352 Series

Values: 50 ohm, 200 ohm, 500 ohm, 1K ohm, 500K ohm

Part No.	1-9	10+
18STC value	$0.90	$0.80

0.1" Spacing

TRIMMER SINGLE TURN

Values: 100 ohm, 500 ohm, 1K ohm, 5K ohm, 10K ohm, 50K ohm, 100K ohm, 500K ohm, 1M ohm

Part No.	Description	1-9	10+
18STH value	Horizontal	$0.45	$0.40
18STV value	Vertical	$0.45	$0.40

POTENTIOMETER 2W PANEL MOUNT, LINEAR

CARBON FILM

Values *(In Ohms):*
500; 1K; 5K; 10K; 25K; 50K; 100K; 500K; 1M; 2.5M

Part No.	1-9	10+
18PMW value	$3.25	$2.75

PANEL MOUNT LINEAR TAPER 1/2W

With Wires

Shaft Diameter 1/4" (Serrated
Wire Length 8"; 22Ga Solid

Part No.	Value	Price
18PMG1K	1K Ohms	$1.25
18PMG10K	10K Ohms	$1.25
18PMG100K	100K Ohms	$1.25

MULTITURN, 2W PANEL MOUNT

- 10 turn pot
- Wire wound, 5% tol
- Metal shaft; dia. 1/4"; length 1/2"
- Cross to Bourn's 3590 Series

Values: 500, 1K, 5K, 10K, 50K, 100K

Part No.	1-9	10+
18PTT value	$6.95	$5.95

POTENTIOMETER MULTI TURN PANEL MOUNT; 5 TURN

POWER RATING; 2W

Values *(In Ohms):* 1K; 5K; 10K

Part No.	1-9	10+
18PTF value	$4.50	$3.95

PANEL MOUNT WITH SWITCH

LINEAR TAPER, 1/2 W

Values: 1K, 5K, 10K, 50K, 100K, 500K, 1M

Part No.	1-9	10+
18PMS value	2.90	2.70

PANEL MOUNT LINEAR TAPER

1/2 W, (SERRATED SHAFT)

SHAFT DIAMETER 1/4"

Values: 500 ohm, 1K ohm, 5K ohm, 10K ohm, 20K ohm, 50K ohm, 100K ohm, 500K ohm, 1M ohm

Part No.	1-9	10+
18PMA value	$1.15	$0.95

PANEL MOUNT LINEAR TAPER, 1/2 W

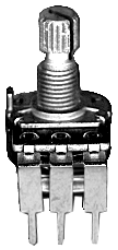
SHAFT DIAMETER 1/4"

Values: 500 ohm, 1K ohm, 2.5 K ohm, 5K ohm, 10K ohm, 50K ohm, 100K ohm, 500K ohm, 1M ohm, 2M ohm

Part No.	1-9	10+
18PMB value	$1.15	$0.95

PANEL/PC MOUNT

LINEAR TAPER, 1/4W



Body Dia.: 0.6"; Serrated shaft dia.: 1/4". PC leads suitable for breadboard mounting

Values: 500, 1K, 2K, 5K, 10K, 50K, 100K, 500K, 1M

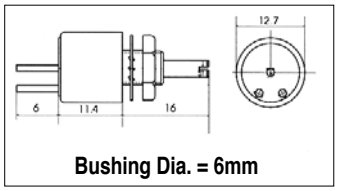
Part No.	1-9	10+
18PMD value	$1.05	$0.95

POTENTIOMETER PANEL MOUNT

SINGLE TURN CERMET: 1 WATT RATING

SHAFT DIAMETER 3mm

Values:
1K, 5K, 10K, 50K, 100K, 1M, 5M



Bushing Dia. = 6mm

Part No.	1-9	10+
18PMC value	$2.25	$1.95

TURNS COUNTING DIALS

- Compact, requires minimal panel space
- Used with panel mount 15 turn potentiometers (1/4" dia. shaft)
- Cross to BI # 2696; RB

Fig. A

Fig. B

Part No.	Fig.	1-9	10+
18CD1	A	$7.95	$6.95
18CD2	B	13.95	12.95

RESISTANCE, CAPACITANCE AND INDUCTANCE SUBSTITUTION BOXES

RC-Box L-Box R-Box C-Box

Dial in the desired value using the convenient side-by-side thumb-wheel switches. Color-codedz switches separate various ranges. High-impact plastic cases.

RESISTANCE

Model RS200 – 1% Accuracy; Model RS201 – 0.1% Accuracy

1Ω to 9,999,999Ω in 1Ω steps. Rated 0.5W. Residual impedance 0.3Ω. 3 1/4" x 3 1/4" x 2 1/4".

CAPACITANCE

Model CS300 – 4% Accuracy; Model CS301 – 1% Accuracy

100pF to 99.9999 F in 100pF steps. Rating 100V (20V for 10-100 F scale). Residual impedance 30pF. 4 1/4" x 3 1/4"

COMBINED RESISTANCE/CAPACITANCE

Combines the features of a resistance and capacitance. Resistance and capacitance can be used independently, in series, or in parallel. Shorting link allows them to be coupled or separated. 7 1/2" x 4 1/4" x 2 1/4"

Model RCS500:

Combines the features and specifications of RS200 and CS300.

Model RCS502:

Combines the features and specifications of RS201 and CS301.

INDUCTANCE:

MODELS LS400A AND LS400

Model LS400A (Standard Model) features 0-999mH in 1mH steps. **Model LS400** (Wide Range Model) features 0-9.999H in 1 mH steps. Both models have:

- 1% accuracy (1.5% max)
- Residual impedance 0.2Ω typical
- 4 3/4" x 3 1/8" x 2 1/4"

Part No.	Description	Price
01RS200	Resistance – 1% Accuracy	$185.00
01RS201	Resistance – 0.1% Accuracy	340.00
01CS300	Capacitance – 4% Accuracy	235.00
01CS301	Capacitance – 1% Accuracy	360.00
01RCS500	Combined Resis. Capacit.– Standard Model	370.00
01RCS502	Combined Resis. Capacit. – Precision Model	680.00
01LS400A	Inductance – Standard Model	695.00
01LS400	Inductance – Wide Range Model	980.00

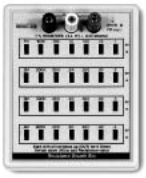
Global® Specialties

SUBSTITUTION BOX RESISTANCE & CAP

- Convenient selection of standard resistors and capacitor values separately or in series and parallel RC combinations
- 36 resistor ranges in values from 15 ohms to 10M, 1 watt 10%
- 18 capacitor ranges in values from 100pf to .22 F, 600V 10%
- Perfect for educational experiments and circuit designs.
- Compact design
- Test leads with alligator clip connectors included

Part No. 01RC10 • Price: $170.00

COST EFFECTIVE SUBSTITUTION BOXES, RESISTANCE, CAP AND INDUCTANCE

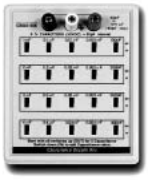


RBox-408

Affordable decade boxes with rugged quality and high precision. Perfect for educational use, R & D, service, production line testing and maintenance.

All Units Feature:

- Sturdy, multi-way binding posts
- Slide switches add/subtract for desired value
- Durable ABS plastic housing case



CBox-406

Model RBOX-408 Resistance Decade Box

- 1 ohm to 11 Meg
- 1 ohm per step, 1% resistors 0.3W
- Seven decades of resistance

Model CBOX-406 Capacitance Decade Box

- 100 pF to 11 F
- 100 pF per step, 5% caps, 50V
- Five decades of capacitance

LBox-405

Inductance Decade Box

- 10 H to 111.1 mH, wide range and high resolution
- Four decades of inductance
- Slide switches that allow the user to simply add or subtract for desire value.

Part No.	Description	1-9	10+
01RBOX408	Res. Sub. Box	$90.00	$85.00
01CBOX406	Cap. Sub. Box	115.00	110.00
01LBOX405	Ind. Sub. Box	128.00	119.00

RSR SMD TESTER FOR RESISTORS & CAPACITORS

Model MS8910

This digital tweezer/tester makes it easy to test tiny surface mount resistors and capacitors. Precise tips made of non-magnetic steel are able to pick and test even the smallest SMD components. It can also test regular components where leads may be too short to insert into test terminals.

- Auto power off
- Low battery indicator
- Built-in high-precision R/C probe
- Ideal for Surface Mount Devices
- Weight: 5.0 oz.

Part No.	Description	Price
01DMMS8910	Digital Tweezer Tester for resistance and capacitance	$29.95

RESISTOR KIT 1/4W

- 610 pcs; 61 values
- 10 pcs per value
- 10 ohms to 1M ohms

Part No. 13RKRESE12 • Price: $6.95

RESISTORS

CARBON FILM – 5% – 1/4W, 1/2W, 1W & 2W

1.0	4.3	18	75	330	1.3K	5.6K	24K	110K	510K	2.4M
1.1	4.7	20	82	360	1.5K	6.2K	27K	120K	560K	2.7M
1.2	5.1	22	91	390	1.6K	6.8K	30K	130K	620K	3.0M
1.3	5.6	24	100	430	1.8K	7.5K	33K	150K	680K	3.3M
1.5	6.2	27	110	470	2.0K	8.2K	36K	160K	750K	3.6M
1.6	6.8	30	120	510	2.2K	9.1K	39K	180K	820K	3.9M
1.8	7.5	33	130	560	2.4K	10K	43K	200K	910K	4.3M
2.0	8.2	36	150	620	2.7K	11K	47K	220K	1M	4.7M
2.2	9.1	39	160	680	3.0K	12K	51K	240K	1.1M	5.1M
2.4	10	43	180	750	3.3K	13K	56K	270K	1.2M	5.6M
2.7	11	47	200	820	3.6K	15K	62K	300K	1.3M	6.2M
3.0	12	51	220	910	3.9K	16K	68K	330K	1.5M	6.8M
3.3	13	56	240	1K	4.3K	18K	75K	360K	1.6M	7.5M
3.6	15	62	270	1.1K	4.7K	20K	82K	390K	1.8M	8.2M
3.9	16	68	300	1.2K	5.1K	22K	91K	430K	2.0M	9.1M
							100K	470K	2.2M	10M

Part No.		Description	10-199	200-999	1000+
13005	value	1/4 w resistor	$0.06	$0.02	$0.009
13.55	value	1/2 w resistor	0.07	0.03	0.014
13015	value	1 w resistor	0.12	0.08	0.06
13025	value	2 w resistor (up to 1 Meg Only)	0.16	0.12	0.08

RESISTOR KITS

365 TOTAL PIECES

1/4w or 1/2w Resistor Kit containing 5 each of 73 standard 5% carbon film resistors in the series:

1.0, 1.2, 1.5, 1.8, 2.2, 2.7, 3.3, 3.9, 4.7, 5.6, 6.8, 8.2, 10, 12, 15, 18, 22, 27, 33, 39, 47, 56, 68, 82, 100, 120, 150, 180, 220, 270, 330, 390, 470, 560, 680, 820, 1K, 1.2K, 1.5K, 1.8K, 2.2K, 2.7K, 3.3K, 3.9K, 4.7K, 5.6K, 6.8K, 8.2K, 10K, 12K, 15K, 18K, 22K, 27K, 33K, 39K, 47K, 56K, 68K, 82K, 100K, 120K, 150K, 180K, 220K, 270K, 330K, 390K, 470K, 560K, 680K, 820K, 1M

Part No.	Description	1-9	10+
13RK2501	1/4w Res. Kit	$6.95	$6.50
13RK5001	1/2w Res. Kit	8.95	8.25

RESISTOR KIT – 1/2W

PLASTIC BOX WITH DIVIDERS

365 total resistors, 5 each of 73 standard 5% carbon film resistors, each value in individual bag:

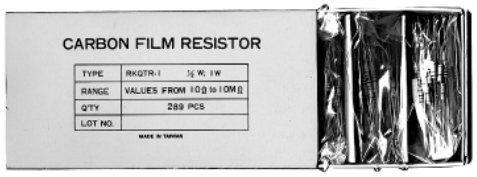
1.0, 1.2, 1.5, 1.8, 2.2, 2.7, 3.3, 3.9, 4.7, 5.6, 6.8, 8.2, 10, 12, 15, 18, 22, 27, 33, 39, 47, 56, 68, 82, 100, 120, 150, 180, 220, 270, 330, 390, 470, 560, 680, 820, 1K, 1.2K, 1.5K, 1.8K, 2.2K, 2.7K, 3.3K, 3.9K, 4.7K, 5.6K, 6.8K, 8.2K, 10K, 12K, 15K, 18K, 22K, 27K, 33K, 39K, 47K, 56K, 68K, 82K, 100K, 120K, 150K, 180K, 220K, 270K, 330K, 390K, 470K, 560K, 680K, 820K, 1M

Part No.	Description	1-9	10+
13RK7305	1/2W Resistor Kit (In Plastic Box)	$11.95	$10.95

DELUXE RESISTOR KIT

1/2W, 1W, 2W

340 PIECES TOTAL, VALUES FROM 10 OHM TO 10M



Conveniently packaged in self-contained box with 14 different see-through bags labeled with value, wattage and quantity.

1/2 WATT: ***5 PIECES EACH OF THE FOLLOWING***:
10, 15, 47, 56, 68, 91, 100, 120, 150, 180, 220, 270, 330, 390, 470, 560, 680, 820, 1K, 1.2K, 1.5K, 1.8K, 2.2K, 2.7K, 3.3K, 3.9K, 4.7K, 5.6K, 6.8K, 8.2K, 10K, 12K, 15K, 18K, 22K, 27K, 33K, 39K, 47K, 56K, 68K, 100K, 150K, 180K, 220K, 270K, 330K, 390K, 470K, 680K, 1M, 1.2M, 2.2M, 3.3M, 4.7M, 10M

1 WATT: ***2 PIECES EACH OF THE FOLLOWING:***
10, 22, 47, 100, 150, 220, 330, 470, 1K, 2.2K, 4.7K, 10K, 22K, 47K, 100K

2 WATT: ***2 PIECES EACH OF THE FOLLOWING:***
10, 22, 47, 100, 150, 220, 330, 470, 1K, 2.2K, 4.7K, 10K, 22K, 47K, 100K

Part No.	1-9	10+
13RKQTR1	$7.95	$6.95

RESISTORS

RESISTORS (SIP)

Values: 100, 220, 330, 470, 1K, 2.2K, 3.3K, 4.7K, 10K, 22K, 33K, 47K, 100K

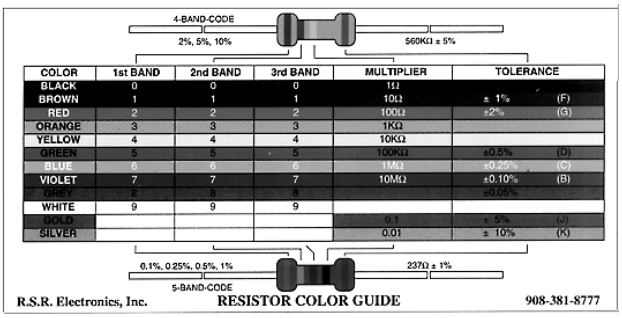
Part No.	Description	1-9	10-99	100+
13S10,9 value	Common Terminal (9 resistors, 10 pins)	$0.21	$0.18	$0.15
13S10,5 value	5 Isolated Resistors (5 resistors, 10 pins)	0.21	0.18	0.15

RESISTORS 30W, 50Ω

TO-220 PACKAGE

Part No.	1-9	10+
1330550	$2.90	$2.60

RESISTOR COLOR CODE GUIDE


4-BAND-CODE
2%, 5%, 10%
560KΩ ± 5%
COLOR | 1st BAND | 2nd BAND | 3rd BAND | MULTIPLIER | TOLERANCE
BLACK 0 0 0 1Ω
BROWN 1 1 1 10Ω ± 1% (F)
RED 2 2 2 100Ω ±2% (G)
ORANGE 3 3 3 1KΩ
YELLOW 4 4 4 10KΩ
GREEN 5 5 5 100KΩ ±0.5% (D)
BLUE 6 6 6 1MΩ ±0.25% (C)
VIOLET 7 7 7 10MΩ ±0.10% (B)
GREY 8 8 8 ±0.05%
WHITE 9 9 9
GOLD 0.1 ± 5% (J)
SILVER 0.01 ± 10% (K)
0.1%, 0.25%, 0.5%, 1%
237Ω ± 1%
5-BAND-CODE
R.S.R. Electronics, Inc.
RESISTOR COLOR GUIDE
908-381-8777

Convenient, pocket-sized, color-coded guide for determining standard and precision resistor values. Also includes many useful formulas, conversion factors, and a list of commonly used resistor values.

Part No.	1-9	10+
13RCCG	$0.26	$0.23

LEAD BENDING GAUGES

Double-sided. Forms leads quickly. Graduated in .05" increments. Radiused edges eliminate scarring of leads. Model ST accepts 1/4W and 1/2W components. Model PR accepts 1W and 2W.

Part No.	Description	1-9	10+
0664ST010	1/4W, 1/2W	$3.95	$3.75
0664PRO12	1W, 2W	3.95	3.75

RESISTOR (DIP)

ISOLATED RESISTORS – 8 (16 PINS)

Values: 100, 220, 330, 470, 1K, 2.2K, 3.3K, 4.7K, 10K, 22K, 33K, 47K, 100K

Part No.	1-9	10-99	100+
13D value	$0.85	$0.75	$0.65

HIGH WATTAGE

5W, 5%

Values: .1, .27, .47, 1, 2, 5, 10, 20, 33, 47, 50, 75, 100, 120, 150, 200, 250, 500, 2K, 5K, 10K

Part No.	1-9	10+
13055 value	$0.45	$0.35

10W, 5%

Values: 1, 2, 5, 7.5, 8, 10, 15, 20, 25, 50, 100, 200, 220, 250, 300, 500, 1K, 1.2K, 5K, 10K

Part No.	1-9	10+
13105 value	$0.55	$0.50

25W, 5%

Values: 10, 15, 25, 50, 2K

Part No.	1-9	10+
13255 value	$1.15	$1.05

RESISTOR SUBSTITUTION BOX

This easy to assemble kit contains 24 different value resistors from 10 to 1M ohms.

Part No.	Prices
3200SUBK (Kit)	$13.95
3200SUBA (Assembled)	21.95

SMD RESISTOR KIT

- Surface mounting resistors, total of 72 and 144 Values respectively
- **Size:** 0805 Length: 2.00 +/-0.1, Width: 1.25 +/- 0.1, Thickness: 0.5 +/- 0.1
- **Tolerance:** 5%
- Each value 50pcs per bag with printed label
- **Max overload voltage:** 200V
- **Operation temperature:** -50 C to +120 C

Part No.	Description	Price
3200SMDR1	Kit includes 3,600Pcs. (72 values) in one pack from 2.4 to 10M	$28.85
3200SMDR2	Kit includes 7,200Pcs. (144 values) in one pack from 2.2 to 10M	54.90

ELECTRONICS COMPONENTS HOBBY PAK

Plastic container with flexible dividers.
Contains 690 components:

- Resistors (73 values); 365 pcs
- Capacitors (Disc, Mylar, and Electrolytics from 2.2 ρf to 1,000 μf)
- LEDs (20 Different kinds)
- LED Displays (4)
- Photocells (2)
- Digital ICs (2 ea) 74LS - 7 diff. values
- Linear ICs (2 ea) 555, 741, 386
- Regulators (2 ea) 7805, 7812, LM317-T
- Transistors (2 ea) 2N3904, 2N3906, PN2222, 2N3055
- Diodes (2 ea) 1N4007, 1N4148, 1N4728, 1N4733, 1N4739, 1N4744
- Bridge Rectifiers (2) RS406
- Inductors (1 ea) 10μh, 33μh, 47μh, 100μh, 1mh, 10mh, 33mh,100mh
- Hookup wire spools (2)
- Alligator Lead Set
- Relays (5V & 12V)
- Microphone, Speaker and Buzzer
- 9V battery snap
- Trim Pots (1K, 10K, 50K, 100K, 1M)
- Switches (2 ea) push button, SPST slide, DPDT slide, 8 pos DIP
- Resistor Guide and Capacitor Guide
- Wire Cutter Stripper (060220)
- DC Motor (3V, 9V)
- Prototype Board (0302PB10) and Breadboard (03MB102)

Part No. 32ECHPK1 • Price: $65.95

Global® Specialties

SUBSTITUTION BOX RESISTANCE & CAP

- Convenient selection of standard resistors and capacitor values separately or in series and parallel RC combinations
- 36 resistor ranges in values from 15 ohms to 10M, 1 watt 10%
- 18 capacitor ranges in values from 100pf to .22 F, 600V 10%
- Perfect for educational experiments and circuit designs.
- Compact design
- Test leads with alligator clip connectors included

Part No. 01RC10 • Price: $170.00

RESISTOR/CAPACITOR SUPER COMBO KIT

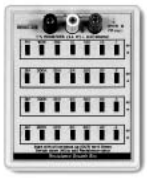
COMBINES TWO OF OUR MOST POPULAR KITS SAVE $

This package consists of our standard 1/2 W resistor kit (#13RK5001,) with (5) pieces each of 73 different and most commonly used values. 365 resistors total. PLUS, we added in our Delux Capacitor Kit (#32DLXCAPKIT,) with a tremendous assortment of discs, mylars, monos and electrolytics. (5) each of 44 different values ranging from 2.2pf - 1,000uF 220 capacitor total. We know the popular and useful values.

Part No.	Description	Price
32RESCAPKIT	Resistor/Capacitor Kit	$22.50

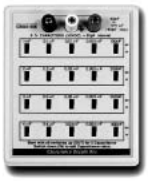
COST EFFECTIVE SUBSTITUTION BOXES, RESISTANCE, CAP AND INDUCTANCE

Affordable decade boxes with rugged quality and high precision. Perfect for educational use, R & D, service, production line testing and maintenance.



RBox-408

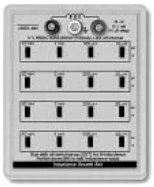
All Units Feature:
- Sturdy, multi-way binding posts
- Slide switches add/subtract for desired value
- Durable ABS plastic housing case



CBox-406

Model RBOX-408 Resistance Decade Box
- 1 ohm to 11 Meg
- 1 ohm per step, 1% resistors 0.3W
- Seven decades of resistance

Model CBOX-406 Capacitance Decade Box
- 100 pF to 11 F
- 100 pF per step, 5% caps, 50V
- Five decades of capacitance



LBox-405

Inductance Decade Box
- 10 H to 111.1 mH, wide range and high resolution
- Four decades of inductance
- Slide switches that allow the user to simply add or subtract for desire value.

Part No.	Description	1-9	10+
01RBOX408	Res. Sub. Box	$90.00	$85.00
01CBOX406	Cap. Sub. Box	115.00	110.00
01LBOX405	Ind. Sub. Box	128.00	119.00

CAPACITORS

MONOLITHIC CAPACITORS

For 1000+ Call For Quote.

Value	Volts	Part No.	1-9	10-99	100+
10 pf	50V	14MN05010P	$0.10	$0.08	$0.06
15 pf	50V	14MN05015P	0.10	$0.08	$0.06
22 pf	50V	14MN05022P	0.10	$0.08	$0.06
47 pf	50V	14MN05047P	0.10	$0.08	$0.06
100 pf	50V	14MN050100P	0.10	$0.08	$0.06
220 pf	50V	14MN050220P	0.10	$0.08	$0.06
330 pf	50V	14MN050330P	0.10	$0.08	$0.06
470 pf	50V	14MN050470P	0.10	$0.08	$0.06
.001 mf	50V	14MN050.001U	0.10	0.08	0.06
.0022 mf	50V	14MN050.0022U	0.10	0.08	0.06
.0033 mf	50V	14MN050.0033U	0.10	0.08	0.06
.0047 mf	50V	14MN050.0047	0.10	0.08	0.06
.01 mf	50V	14MN050.01U	0.10	0.08	0.06
.022 mf	50V	14MN050.022U	0.10	0.08	0.06
.033 mf	50V	14MN050.033U	0.10	0.08	0.06
.047 mf	50V	14MN050.047U	0.10	0.08	0.06
.1 mf	50V	14MN050.1U (.1 LS)	0.10	0.08	0.06
.1 mf	50V	14MN050.1U-W (.2 LS)	0.10	0.08	0.06
.22 mf	50V	14MN050.22U	0.15	0.12	0.10
.33 mf	50V	14MN050.33U	0.15	0.12	0.10
.47 mf	50V	14MN050.47U	0.16	0.14	0.12
1 mf	50V	14MN0501U	0.25	0.20	0.16

SILVER DIPPED MICA CAPACITORS

For 1,000+ Call For Quote

Value	Volts	Part No.	1-9	10-99	100+
10 pf	500V	14DM50010P	$0.55	$0.44	$0.36
22 pf	500V	14DM50022P	0.55	0.44	0.36
33 pf	500V	14DM50033P	0.55	0.44	0.36
47 pf	500V	14DM50047P	0.55	0.44	0.36
68 pf	500V	14DM50068P	0.55	0.44	0.36
100 pf	500V	14DM500100P	0.56	0.45	0.37
220 pf	500V	14DM500220P	0.75	0.62	0.50
330 pf	500V	14DM500330P	1.00	0.85	0.70
470 pf	500V	14DM500470P	1.15	1.00	0.85
680 pf	100V	14DM100680P	1.50	1.30	1.10
1000 pf	100V	14DM1001000P	1.60	1.40	1.20

VARIABLE TRIMMER CAPACITORS

WV 200 V DC

Cap. Range pf	Part No.	1-9	10+
2-6 pf	14VC 2-6P	$1.10	$0.95
5-30 pf	14VC 5-30P	1.10	0.95
9-50 pf	14VC 9-50P	1.10	0.95
10-70 pf	14VC 7-70P	2.25	1.95

VARIABLE CAPACITOR MICA TRIMMER

These variable compression mica trimming capacitors are made of stacked mica dielectric units. The base is made of the lowest dielectric loss ceramic material available and mica is clear India Ruby. The soldering lugs may be bent in any position without affecting capacity.

Part No.	Cap. Range (pf)	1-9	10+
14VC10-180p	10–180pf	$2.55	$2.35
14VC75-380p	75–380pf	2.95	2.75
14VC140-580p	140–580pf	3.50	3.25
14VC215-790p	215-790pf	3.95	3.50
14VC300-1000p	300-1000pf	4.50	3.95

R. F. TUNER CAPACITOR

- OSC: 5-59 pf
- ANT: 5-142 pf
- OSC & ANT; Trimmer 10pf range

Part No.	1-9	10+
14VCRF10-280P	$1.90	$1.70

CAPACITOR KIT ECONOMY

DISK (500V) – 4 ea.
10 pf, 22 pf, 47 pf, 100 pf, 220 pf, 470 pf

MYLAR (100V) – 4 ea.
.001 f, .0022 f, .0047 f , .01 f, .022 f, .1 f, .22 f, .47 f

ELECTRO
50V: 4 ea – 1 f, 4.7 f, 22 f
8 ea. – 10 f
35V: 4 ea. – 47 f, 100 f
25V: 4 ea. – 470 f
2 ea. – 1,000 f

Part No. 32ECOCAPKIT • Price: $6.75

DELUXE CAPACITOR KIT

IDEAL FOR PROTOTYPING, HOBBYIST, STUDENTS

DISK (500V) – 5 ea.
2.2 pF, 3.3 pF, 4.7 pF, 6.8 pF, 10 pF, 22 pF, 33 pF, 47 pF, 68 pF, 100 pF, 150 pF, 220 pF, 330 pF, 470 pF, 680 pF

MYLAR (100V) – 5 ea.
.001, .0022, .0033, .0047, .0068, .01, .022, .033, .047, .068, .1, .22, .47

MONOLYTHIC (50V) - 5 ea.
01 F, .1 F, .22 F

ELECTRO RADIAL – 5 ea.
50V: 1 F, 2.2 F, 3.3 F, 4.7 F, 10 F, 22 F, 33 F
35V: 47 F, 100 F, 220 F, 330 F, 470 F, 1,000 F

Packaged in Cardboard Box

Part No. 32DLXCAPKIT • Price: $14.95

DIPPED TANTALUM CAPACITORS

± 20% POLARIZED

For 1,000+ Call For Quote.

Value	Volts	Part No.	1-9	10-99	100+
.1 f	35	14TA035.1U	$0.27	$0.20	$0.17
.22 f	35	14TA035.22U	0.27	0.20	0.17
.33 f	35	14TA035.33U	0.27	0.20	0.17
.47 f	35	14TA035.47U	0.27	0.20	0.17
1 f	35	14TA0351U	0.27	0.20	0.17
2.2 f	35	14TA0352.2U	0.33	0.27	0.21
3.3 f	35	14TA0353.3U	0.35	0.31	0.25
4.7 f	35	14TA0354.7U	0.58	0.45	0.39
10 f	16	14TA01610U	0.39	0.33	0.27
10 f	35	14TA03510U	0.75	0.63	0.53
22 f	10	14TA01022U	0.56	0.46	0.38
22 f	25	14TA02522U	1.45	1.28	1.18
47 f	10	14TA01047U	0.85	0.75	0.65
47 f	16	14TA01647U	1.45	1.25	1.10

CAPACITOR SUBSTITUTION BOX

Contains 12 different values capacitors from 100pf to 1 F.

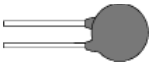
Part No.	Price
32CSBK (Kit)	$14.95
32CSBA (Assembled)	23.95

MYLAR RADIAL – ± 10%

For 1,000+ Call For Quote.

Value	Volts	Part No.	1-9	10-99	100+
.001 f	100V	14MR100.001U	$0.10	$0.06	$0.05
.0022 f	100V	14MR100.0022U	0.10	0.06	0.05
.0033 f	100V	14MR100.0033U	0.10	0.06	0.05
.0047 f	100V	14MR100.0047U	0.10	0.06	0.05
.0068 f	100V	14MR100.0068U	0.10	0.06	0.05
.01 f	100V	14MR100.01U	0.11	0.09	0.06
.022 f	100V	14MR100.022U	0.12	0.09	0.06
.033 f	100V	14MR100.033U	0.12	0.09	0.06
.047 f	100V	14MR100.047U	0.12	0.09	0.06
.068 f	100V	14MR100.068U	0.12	0.09	0.06
.1 f	100V	14MR100.1U	0.15	0.11	0.08
.22 f	100V	14MR100.22U	0.25	0.19	0.15
.33 f	100V	14MR100.33U	0.27	0.21	0.17
.47 f	100V	14MR100.47U	0.30	0.25	0.19
1 f	100V	14MR1001U	0.60	0.55	0.45
2.2 f	100V	14MR1002.2U	0.90	0.75	0.60
4.7 f	100V	14MR1004.7U	1.00	0.85	0.70

CERAMIC DISC – ± 20%



For 1,000+ Call For Quote

Value	Volts	Part No.	1-9	10-99	100+
2.2 pf	500V	14DK5002.2P	$0.12	$0.10	$0.05
4.7 pf	500V	14DK5004.7P	0.12	0.10	0.05
10 pf	500V	14DK50010P	0.12	0.10	0.05
12 pf	500V	14DK50012P	0.12	0.10	0.05
15 pf	500V	14DK50015P	0.12	0.10	0.05
22 pf	500V	14DK50022P	0.12	0.10	0.05
27 pf	500V	14DK50027P	0.12	0.10	0.05
33 pf	500V	14DK50033P	0.12	0.10	0.05
47 pf	500V	14DK50047P	0.12	0.10	0.05
56 pf	500V	14DK50056P	0.12	0.10	0.05
68 pf	500V	14DK50068P	0.12	0.10	0.05
100 pf	500V	14DK500100P	0.12	0.10	0.05
120 pf	500V	14DK500120P	0.12	0.10	0.05
150 pf	500V	14DK500150P	0.12	0.10	0.05
220 pf	500V	14DK500220P	0.12	0.10	0.05
270 pf	500V	14DK500270P	0.12	0.10	0.05
330 pf	500V	14DK500330P	0.12	0.10	0.05
470 pf	500V	14DK500470P	0.12	0.10	0.05
560 pf	500V	14DK500560P	0.12	0.10	0.05
680 pf	500V	14DK500680P	0.12	0.10	0.05
820 pf	500V	14DK500820P	0.12	0.10	0.05
.001 f	50V	14DK050.001U	0.10	0.08	0.05
.0022 f	50V	14DK050.0022U	0.10	0.08	0.05
.0033 f	50V	14DK050.0033U	0.10	0.08	0.05
.0047 f	50V	14DK050.0047U	0.10	0.08	0.05
.0068 f	50V	14DK050.0068U	0.10	0.08	0.05
.01 f	50V	14DK050.01U	0.10	0.08	0.05
.022 f	50V	14DK050.022U	0.10	0.08	0.05
.033 f	50V	14DK050.033U	0.10	0.08	0.05
.047 f	50V	14DK050.047U	0.12	0.10	0.07
.068 f	50V	14DK050.068U	0.12	0.10	0.07
.1 f	50V	14DK050.1U	0.15	0.12	0.10

CAPACITOR KIT – *COMES WITH BOX W/DIVIDERS*

Assortment of 30 different values. Disc, Mylar, and electrolytic types included. Values from 2.2 pf to 2,200 f. 60 pcs.

DISC: 2.2 pf, 4.7pf; 10pf; 22pf; 47pf; 100pf; 220pf; 330pf; 470pf; 680pf; .001 f.
MYLAR: .0022 f; .0033 f; .0047 f; .01 f; .022 f; .033 f; .047 f; .1 f; .22 f; .47 f.
ELECTROLYTIC: 1 f; 4.7 f; 10 f; 22 f; 47 f; 100 f; 220 f; 470 f; 1000 f; 2200 f.

Part No. 32CAPKIT • Price: $13.95

CERAMIC DISC CAPACITOR KIT

COMES WITH BOX W/DIVIDERS

Assortment of 15 different values. 10 pieces per value (total 150 pieces).10pf; 22pf; 33pf; 47pf; 100pf; 220pf; 330pf; 470pf; 680pf; .001 f; .0022 f; .0047 f; .01 f; .022 f; .047 f.

Part No. 32DKKIT • Price: $14.95

ELECTROLYTIC RADIAL LEAD

For 1,000+ Call For Quote.

Value	Volts	Part No.	1-9	10-99	100+
.47 f	50V	14ER050.47U	$0.15	$0.09	$0.07
1 f	50V	14ER0501U	0.14	0.08	0.06
2.2 f	50V	14ER0502.2U	0.15	0.09	0.07
3.3 f	50V	14ER0503.3U	0.15	0.09	0.07
4.7 f	50V	14ER0504.7U	0.15	0.09	0.07
10 f	50V	14ER05010U	0.15	0.10	0.08
22 f	35V	14ER03522U	0.16	0.10	0.09
22 f	50V	14ER05022U	0.16	0.11	0.10
33 f	35V	14ER03533U	0.16	0.11	0.10
47 f	35V	14ER03547U	0.16	0.11	0.10
47 f	50V	14ER05047U	0.16	0.12	0.10
100 f	25V	14ER025100U	0.19	0.13	0.11
100 f	35V	14ER035100U	0.15	0.12	0.10
100 f	50V	14ER050100U	0.20	0.16	0.14
220 f	35V	14ER035220U	0.25	0.21	0.18
330 f	35V	14ER035330U	0.30	0.25	0.19
470 f	25V	14ER025470U	0.30	0.25	0.19
470 f	35V	14ER035470U	0.32	0.27	0.21
470 f	50V	14ER050470U	0.34	0.29	0.23
1,000 f	25V	14ER0251000U	0.60	0.45	0.40
1,000 f	50V	14ER0501000U	0.80	0.70	0.65
2,200 f	35V	14ER0352200U	0.90	0.85	0.70
2,200 f	50V	14ER0502200U	1.45	1.25	1.05
3,300 f	35V	14ER0353300U	1.40	1.25	0.95
3,300 f	50V	14ER0503300U	1.95	1.65	1.45
4,700 f	35V	14ER0354700U	1.80	1.60	1.30
4,700 f	50V	14ER0504700U	2.50	2.10	1.75

ELECTROLYTIC AXIAL LEAD

For 1,000+ Call For Quote.

Value	Volts	Part No.	1-9	10-99	100+
1 f	50V	14EA0501U	$0.15	$0.12	$0.10
3.3 f	50V	14EA0503.3U	0.15	0.12	0.10
4.7 f	50V	14EA0504.7U	0.15	0.12	0.10
10 f	50V	14EA05010U	0.22	0.18	0.16
22 f	50V	14EA05022U	0.30	0.25	0.20
47 f	50V	14EA05047U	0.28	0.25	0.20
100 f	35V	14EA035100U	0.60	0.55	0.45
100 f	50V	14EA050100U	0.40	0.35	0.30
220 f	35V	14EA035220U	0.40	0.35	0.30
220 f	50V	14EA050220U	0.45	0.40	0.35
330 f	35V	14EA035330U	0.45	0.40	0.35
330 f	50V	14EA050330U	0.60	0.55	0.45
470 f	35V	14EA035470U	0.70	0.60	0.45
470 f	50V	14EA050470U	0.80	0.70	0.60
1,000 f	25V	14EA0251000U	0.70	0.65	0.60
1,000 f	35V	14EA0351000U	0.90	0.85	0.80
1,000 f	50V	14EA0501000U	0.90	0.80	0.75
2,200 f	35V	14EA0352200U	1.30	1.20	1.10
2,200 f	50V	14EA0502200U	1.95	1.75	1.45
3,300 f	35V	14EA0353300U	1.70	1.50	1.30
3,300 f	50V	14EA0503300U	2.25	1.95	1.75

ELECTROLYTIC NONPOLARIZED RADIAL

For 1,000+ Call For Quote.

Value	Volts	Part No.	1-9	10-99	100+
1 f	50V	14ERN0501U	$0.25	$0.22	$0.18
4.7 f	50V	14ERN0504.7U	0.29	0.27	0.21
10 f	50V	14ERN05010U	0.42	0.40	0.30
22 f	50V	14ERN05022U	0.60	0.57	0.43
47 f	50V	14ERN05047U	0.80	0.75	0.58
100 f	50V	14ERN050100U	0.95	0.90	0.75

ELECTROLYTIC HIGH VOLTAGE

For 1,000+ Call For Quote

Value	Volts	Type	Part No.	1-9	10-99	100+
1 f	160V	Radial	14ER1601U	$0.25	$0.20	$0.12
4.7 f	160V	Radial	14ER1604.7U	0.35	0.25	0.16
10 f	160V	Radial	14ER16010U	0.40	0.30	0.20
47 f	160V	Radial	14ER16047U	0.70	0.65	0.60
100 f	160V	Radial	14ER160100U	1.45	1.20	0.95

ELECTROLYTIC CAPACITOR KIT

COMES WITH BOX W/DIVIDERS – Assortment of 10 different values. 5 pieces per value (total 50 pieces). 1 f to 2,200 f. Radial lead 35V or 50V 1 f; 4.7 f; 10 f; 22 f; 47 f; 100 f; 220 f; 470 f; 1000 f; 2200 f.

Part No. 32ERKIT • Price: $13.95

INDUCTORS / TRANSFORMERS

6 PC. ALIGNMENT SET

VARIOUS SHAPES AND SIZES

Part No.	1-9	10+
153VTPT	$4.50	$3.95

3 PC. ALIGNMENT SET

ANTI-STATIC

Anti-static body with screwdrivers and hex ends.

Part No.	1-9	10+
153CL0303	$4.50	$3.95

ALIGNMENT TOOLS

All tools are made from materials such as Nylon, Delrin, and Tenite.

153COMM9

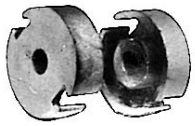
Part No.	Description	1-9	10+
153H5N	5" long, double hex (.10" & .075")	$0.75	$0.65
153HS5N	Screwdriver/Hex (.075") and Square	0.70	0.55
153CB54	5" long, triple hex (.100/.075/.100") one side recessed	0.65	0.50
153CIE6	6" long, double metal tab ends, one inset, one extended	0.90	0.75
153MARS12	6" long mini screwdriver (.02x.05) Reg. screwdriver(.020x.195) and notch for wire pulling	0.65	0.50
153COMM6	Contains 6 diff. types of alignment tools in a vinyl pouch	3.50	2.90
153COMM9	Contains 9 diff. types of alignment tools in a vinyl pouch	4.95	3.50
153H5X	5" Long Double Hex (.125") one Side Recessed	0.65	0.55

ALIGNMENT TOOLS

Flexible plastic, 200mm (8") long. Blade dia: 2.0mm

Part No. 153908607 • Price: $0.95

FERRITE POT CORE



To obtain large inductance with a relatively small core size. Pot cores are completely self-shielding. Pot core assembly is supplied with 2 pot core halves, a nylon mounting bolt, and a nylon bobbin.

Part No.	1-9	10+
152POTCORE	$6.95	$6.50

TOROIDAL CORES

Part No.	Freq. Range	Dia. (inches) Outside	Inside	Height	1-9	10+
152T 37-2	1-30 MHz	.375	.205	.128	$1.15	$1.05
152T 50-2	1-30 MHz	.500	.303	.190	1.10	1.05
152T 50-6	2-50 MHz	.500	.303	.190	1.20	0.90
152T 68-2	1-30 MHz	.690	.370	.190	1.95	1.75
152T 80-1	500 KHz-1 MHz	.795	.495	.250	1.45	1.35
152T 80-2	1-30 MHz	.795	.495	.250	1.45	1.35
152FT 50-61	.2-15 MHz	.500	.281	.188	1.60	1.50
152FT 82-72	1K-500 KHz	.820	.516	.250	1.35	1.25

AUDIO TRANSFORMERS

Part No.	Description	1-9	10+
16A500-8	500CT/8CTOutput	$1.90	$1.80
16A600-600	600CT/600CT Coupling	2.10	1.95
16A1K-8	1KCT/8CT Output	1.95	1.80
16A10K-10K	10KCT/10KCT Interstage	3.45	3.15
16A10K-2K	10KCT/2KCT driver	1.95	1.75
16A600-600-2	600CT/600,600 Coupling Dual Secondary	2.75	2.25

IF-TRANSFORMER:

SUB-MINIATURE 455 KHZ

Part No.	Description	Color Of Slug	Turns Ratio	1-9	10+
16IFR	Osc. Tuning	Red	12:1	$1.25	$1.15
16IFY	1st IF 50K:500	Yellow	22:1	1.25	1.15
16IFW	2nd IF30K:500	White	22:1	1.25	1.15
16IFB	3rd IF 20K:5K	Black	6:1	1.25	1.15

CERAMIC FILTERS

For use in high selectivity small type radios, high grade stereo and radio cassette models.

A.M. CERAMIC FILTER

Center frequency = 455 KHz; BW (6db) = 10 KHz input/output impedance = 2K/2K; insertion loss = 6db maximum.

Part No.	1-9	10-99	100+
15 CFM2-4550	$4.50	$3.95	$3.25

F.M. CERAMIC FILTER

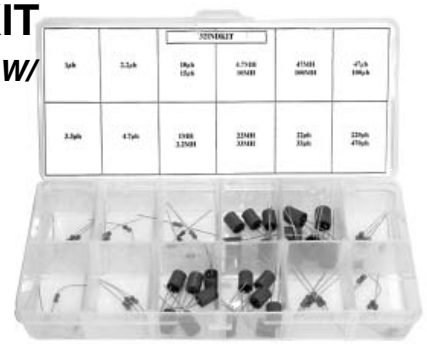
Center frequency = 10.7 MHz; BW (3db) = 280 KHz input/output impedance = 330/330; insertion loss = 6 db max.

Part No.	1-9	10-99	100+
15 CFSC	$2.61	$2.36	$2.25

INDUCTOR KIT

COMES WITH BOX W/ DIVIDERS

Assortment of 20 different values (total of 60 pieces).Values from 1 h to 100 mh.



Part No.	Price
32 IND KIT	$27.95

FILTER CHOKES

Value	Stk No.	DC mA	DC RES	1-9	10+
0.5 H	15C 36X	10	30	5.95	4.95
1.5 H	15C 85X	10	70	$7.00	$6.50
7.0 H	15C 1707	50	550	9.00	7.50
7.0 H	15C 8X	75	240	10.00	9.50

OPEN FRAME COIL

PHENOLIC OF IRON FORM

QMIN = 30

Part No.	Value	1-9	10+
150 2.5M-O	2.5 mh	1.95	1.65
150 10M-O	10 mh	1.65	1.45
150 50M-O	50 mh	2.50	2.25

VARIABLE INDUCTORS

Inductance Range	Part No.	Test Freq.	Q	1-9	10+
3.4 h to 5.8 h	1513.4-5.8 U	7.9 MHz	45	$2.95	$2.75
5.6 h to 10 h	1515.6-10U	7.9 MHz	40	2.95	2.75
60 h to 120 h	15160-120U	790 KHz	48	3.50	3.00
270 h to 432 h	151270-432U	790 KHz	30	2.95	2.75
40 mh to 80 mh	15140-80M	79 KHz	34	2.95	2.75
90 mh to 110 mh	15190-110M	79 KHz	30	3.90	3.50

TRIGGER TRANSFORMERS

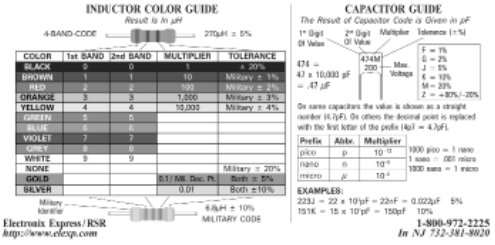
300V INPUT, 4KV OUTPUT

Fig. A

Fig. B

Part No	Figure	Price
16TRIG1	A	$3.75
16TRIG2	B	4.25

INDUCTOR / CAPACITOR COLOR GUIDE



Convenient, pocket-sized color guide for determining standard inductor and capacitor values. Also includes many useful formulas and commonly used inductor and capacitor values.

Part No.	1-9	10+
13LCG	$0.25	$0.21

ENCAPSULATED R. F. CHOKES

For 100+ Call For Quote

Value	Part No.	D.C.R. Max (ohm)	IDC Max (ma)	1-9	10+
1 mh	1501M	5	150	$0.95	$0.85
1.5 mh	1501.5M	7	150	0.85	0.75
2.2 mh	1502.2M	9	100	0.85	0.75
2.7 mh	1502.7M	9	100	0.85	0.75
3.3 mh	1503.3M	10	100	0.85	0.75
4.7 mh	1504.7M	18	80	0.85	0.75
6.8 mh	1506.8M	20	80	0.85	0.75
10 mh	15010M	40	58	0.95	0.85
12 mh	15012M	45	50	0.95	0.85
15 mh	15015M	50	50	1.05	0.95
22 mh	15022M	57	50	0.95	0.85
27 mh	15027M	70	50	0.95	0.85
33 mh	15033M	75	50	1.05	0.95
47 mh	15047M	75	50	0.95	0.85
56mh	15056M	75	50	0.95	0.85
68 mh	15068M	100	50	0.95	0.85
100 mh	150100M	150	30	1.05	0.95
120 mh	150120M	200	30	1.35	1.20
150 mh	150150M	250	30	1.35	1.20
220mh	150220M	350	30	1.65	1.45
470 mh	150470M	600	30	3.40	3.10
1000 mh	1501000M	1,000	30	4.65	4.10

MINIATURE EPOXY COATED CHOKES

For 100+ Call For Quote

Value	Part No.	D.C.R. Max (ohm)	IDC Max (ma)	1-9	10+
.22 h	150.22U	.12	1400	$0.45	$0.38
.33 h	150.33U	.14	1280	0.65	0.60
.47 h	150.47U	.17	1150	0.65	0.60
.68 h	150.68U	.20	1040	0.45	0.38
1.0 h	1501U	.24	920	0.45	0.38
1.2 h	1501.2U	.27	880	0.65	0.60
1.5 h	1501.5U	.30	830	0.45	0.38
2.2 h	1502.2U	.35	750	0.45	0.38
3.3 h	1503.3U	.44	670	0.45	0.38
4.7 h	1504.7U	.54	620	0.45	0.38
6.8 h	1506.8U	.64	550	0.45	0.38
10 h	15010U	.81	500	0.45	0.38
12 h	15012U	1.37	480	0.45	0.38
15 h	15015U	1.62	460	0.45	0.38
22 h	15022U	1.88	410	0.45	0.38
33 h	15033U	2.39	370	0.65	0.60
47 h	15047U	2.78	340	0.45	0.38
68 h	15068U	3.42	305	0.45	0.38
100 h	150100U	4.35	275	0.45	0.38
150 h	150150U	4.85	175	0.45	0.38
220 h	150220U	5.87	155	0.45	0.38
470 h	150470U	13.90	126	0.45	0.38
1000 h	1501000U	22.20	100	0.45	0.38

WALL ADAPTERS

AC TO DC WALL ADAPTERS

Part No.	Description	1-9	10+
16D6-.5	6VDC 500mA	$4.95	$4.50
16D9-.3	9VDC 300mA	3.95	3.50
16D9-.5	9VDC 500mA	4.95	4.50
16D8-1	8VDC 1 Amp	5.95	5.50
16D12-.5	12VDC 500mA	8.95	7.50

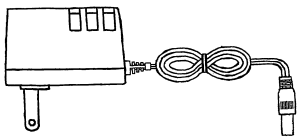
DC WALL ADAPTER–

DUAL OUTPUT

- 12V DC @ 500mA
- DIN connector output / 18W

Part No. 16DADTRN • Price: $16.95

REGULATED WALL ADAPTERS



- 5V DC or 12V DC
- Center Positive

Part No.	Description	1-9
16D5RG-800M	5VDC @ 800mA, 2.5mm plug	4.95
16MGT12500R	12VDC @ 500mA, 2.1mm plug	$7.95

SWITCHING POWER ADAPTER

COMPACT 30/40 W SELECTABLE OUTPUT

- 8 different DC plugs
- For notebook & electronic devices
- Short Circuit & overload protection
- Input 100 — 240 VAC 50/60 HZ
- Output 5 —12 VDC @ 4A to 2.5A Model
- Output 12V — 24 VDC @ 2.5A to 1.65A

Part No.	Description	
16DPSSE13U	5 to 12 VDC - 8 selectable outputs in 1V steps, 30W	$31.95
16DPSSE14U	12 V to 24V - 13 selectable outputs in 1 V steps, 40W	31.95

DC-DC CAR CONVERTER

IC REGULATED

- Car power adaptor.
- Stable DC output.
- Short circuit protected.
- Automatic thermal and overload cut-off.
- **Input:** 12V DC
- **Output:** 1.5/3/4/6/7.5/9/12V

Part No.	1-9	10+
16DCTS535	$7.20	$6.20

velleman CIGARETTE 4-IN-1 PLUG + CAR BATTERY TESTER

This model is designed to convert your car's existing cigarette lighter socket into : 1x cigarette lighter socket + 3x 12V dc socket.

- Fuse-protected DC jack: 10A
- With 3-LED battery meter: indicates the charging level of the car battery (high, medium or low)
- Cable length: 5 ft.

Part No. 16PLUGC4F • Price: $9.95

SWITCHING POWER ADAPTER

- Includes 6' power cord, 2.1mm center positive plug
- Input 100–240VAC; 50-60Hz

Part No.	Description	Price
16D6500SW	6VDC @ 500mA, Switching	$7.90
16D9500SW	9VDC @ 500mA, Switching	7.90
16D121AR	12VDC @ 1A	11.50
16DST241A	24VDC @ 1A	12.95

SWITCHING POWER ADAPTER

10 WATT / SELECTABLE OUTPUT

- **Output**: 3, 4, 5, 6, 7.5, 9, 12V DC
- **Input**: 100–230V AC; 50/60 Hz
- **Output Current:** 800mA / 1.5A max
- **Plugs:** 8 different sizes
- **Dimensions:** 2.6" x 1.1" x 2.9";
- **Wt.**: 3.0 oz.

Part No. 16DPSSMV1USA • Price: $13.75

MULTI VOLTAGE AC TO DC WALL ADAPTER

- **Output:** 3, 4, 5, 6, 7.5, 9, 12V DC
- **Output** Current: 500mA
- **Plugs;** 6 different sizes – 2.5mm, 3.5mm, 2.1x5.5mm, 2.5x5.5mm, 1.35x3.5mm, 1.7x4.0mm and 9V snap adapter
- Ideal for audio equipment, UL Listed

Part No. 16DBE227 • Price: $10.95

AC WALL ADAPTERS

120V AC TO AC LOW VOLTAGE

- Class 2 Transformer
- UL&CE Approved
- Input: 115-120 VAC / 60Hz

Part No.	Output Voltage	1-9	10+
16AC5.6	5.6VAC, 200mA	$4.95	$3.95
16AC	9VAC, 500mA	5.95	5.50
16AC9VK	16VAC, 1000mA	9.95	9.50
16AC12VK	12VAC, 1000mA	10.95	10.50
16AC15-750	15VAC, 750mA	6.95	6.50
16AC15VK	15VAC, 1000mA	11.50	10.95
16AC18VK	18VAC, 500mA	10.95	10.50

AC/DC ADAPTER

WORLD TRAVELER

- Dual voltage 110/220V with two flat pin and two round pin plugs
- Output: 1.5, 3, 4.5, 6, 7.5, 9, 12V DC with LED indicator. Six most common plugs.
- Fits many appliances – radios, games, calculators, toys, portable phones etc.

Part No. 16D48-140 • Price $8.90

RSR

VARIABLE AC TRANSFORMER

5 AMP AND 10 AMP MODELS

- **Input Voltage:** 110V; 5' cord with 3 prong plug
- **Output Voltage:** 0 to 130 VAC
- **Output Current:** 5 Amp / 10 Amp
- Analog Voltmeter, 3 prong output socket
- **Weight:** Model 520T-05 – 8 lbs.
  Model 520T-10– 14 lbs.

Part No.	Description	Price
16VA520T05	5A, Variable AC Voltage	$105.00
16VA520T10	10A, Variable AC Voltage	129.00

ISOLATION TRANSFORMER

- Three conductor line card and receptacle.
- Electrostatic shield internally connected to 3rd conductor.
- Output: 120V AC @ 2.5A.
- Manual reset type thermal breaker.

Part No. 16PISL288 • Price: $85.00

velleman

INDUSTRIAL SWITCHING POWER SUPPLIES

- Input 100-120 VAC / 200-240 VAC Switch selectable
- Input rush current 15A @ 110V
- Overload protection with auto recovery

Model PSIN02505N

Model PSIN10012N

Part No.	Description	Price
16DPSIN02505	5V DC @ 5A; 25W	$24.95
16DPSIN04005	5V DC @ 8A; 40W	32.95
16DPSIN06012	12V DC @ 5A; 60W	32.95
16DPSIN10012	12V DC @ 8.3A; 100W	36.95
16DPSIN15012	12V DC @ 12.5A; 150W	42.95
16DPSIN10024	24V DC @ 4.1A; 100W	37.95
16DPSIN15024	24V DC @ 6.2A; 150W	42.95

POWER TRANSFORMERS

Part No.	Description		1-9	10+
16P16.3-1	6.3 VCT,	1A	$9.95	$9.50
16P112-.1	12.6 VCT	.1A	3.95	3.00
16P112-.3	12.6 VCT,	.3A	5.95	4.95
16P112-1	12.6 VCT,	1A	6.50	5.95
16P112-3	12.6 VCT,	3A	17.50	16.95
16P124-.3	24 VCT,	.3A	5.95	5.25
16P126-1	26 VCT,	1A	7.50	7.00
16P125-2	25VCT,	2A	13.95	12.95
16P130-1	30 VCT,	1A	9.75	9.25
16P130-2	30 VCT,	2A	14.50	13.95

MULTI-TAP POWER TRANSFORMERS

Part No.	Description	1-9	10+
16P232129-1	32V, 1A CT 12V, 1A CT 9V, 1A CT	$19.95	$18.95

RSR AC/DC POWER SUPPLY

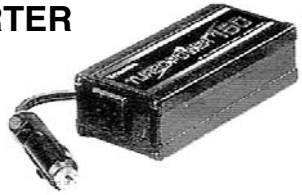
2A/4A MODELS

- **AC and DC outputs (DC regulated)**
- **DC output 1.5 to 24V in 11 steps**
- **AC output 2V to 24V in 11 steps**
- **Protection:** DC output current limit, AC input fuse
- **DC Line Regulation:** 3%
- **DC Load Regulation:** 5%
- **DC Ripple Voltage:** 10mV
- **Dimensions:** 200(W) x 220(D) x 155(H) mm 7.9(W) x 8.7(D) x 6.1(H) inches
- **Weight:** 24 lbs *(2A Model);* 18 lbs. *(4A Model)*

Part No.	Current	Price
01PSACDC1	2A	$95.00
01PSACDC2	4A	105.00

POWER INVERTER

12V DC – 110 AC INVERTER

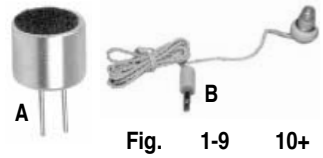


- Low battery alarm.
- Overload protection, low battery shut down.
- Input short circuit protection.

Part No.	Description	Price
01PITS59-150	150W Continuous; 300 Peak	$39.95
01PIST59-300	300W Continuous; 600 Peak	61.95

SPEAKERS / BUZZERS

MICROPHONES AND EARPHONES



Part No.	Description	Fig.	1-9	10+
26MPFET	FET, 2 to 10V DC, 1K ohm impedance, 50 to 8 KHz	A	$1.50	$1.30
26EP03	Dynamic earphone w/2.5mm plug, 8Ω	B	0.70	0.50
26EP04	Earphone w/3.5mm plug, 2K impedance	B	2.25	1.95
26EP06	Dynamic earphone with 3.5mm plug, 3' cord	B	1.25	1.15

PIEZO SIREN – 2 TONE

Loud two-tone siren for auto or home security applications. Operates 6-18 Vdc, 100db output, 100mA@12VDC. Osc. frequency 4.4KHz. Two mounting holes on diagonal 1.8" center; 6" wire leads, 1.9" x 1.5" x 0.9".

Part No	1-9	10+
26PZ12	$4.25	$3.75

SIREN 6 TONE

- 6 tone electronic siren
- 12V DC operation
- Adjustable mounting bracket
- 4" long, 3.5" dia / color black
- Cable length 15"

Part No. 26ST6 • Price: $6.95

HEADPHONES

ECONOMY MODEL:

Ultra-lightweight, 27mm Mylar cone, cord length 4', impedance – 23Ω.

STEREO HEADPHONES WITH VOLUME CONTROL:

Metallic Color with soft self-adjusting inner headpad, 1 3/16" drivers and single-sided 6.5 ft. cable

DELUXE MODEL:

Hi-fi monitor headphones, 40mm super-thin diaphram, impedance – 32Ω, sensitivity: 106db, S.P.L. @ 1KHz, cord length – 9'.

Part No.	Description	Price
045HP002	Economy Model	$3.95
045EP257	Stereo Headphones with Volume Control	10.95
045HP924	Deluxe Model	16.95

velleman KARAOKE SET

- 1 x karaoke sound mixer: PROMIX02
- 2 x dynamic microphone: MIC3BL

Part No. 26VDSPROM4 • Price: $45.00

SPEAKERS

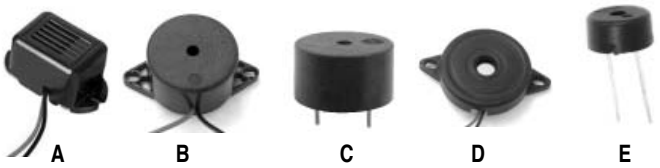
Part No.	Description	1-9	10+
26SP08	2" round, 8 ohm, 0.2W	$0.95	$0.75
26SP08WR	2" round, 8 ohm 0.2W With Wire Leads	1.25	1.10
26SP16	3" round 16 ohm .2W	1.50	1.30

SPEAKER WITH PC LEADS

Mini 8 ohm speaker 1" round with PC leads. Mylar cone, 0.1W. Ideal for breadboarding. Frequency response 700 Hz to 5 KHz.

Part No.	Size	1-9	10+
26SPPC	1" Dia.	$1.85	$1.65
26SPSM	1.4" Dia.	0.75	0.65

BUZZERS AND AUDIO INDICATORS



- Buzzer-Electronic and Piezo indicators have drive circuitry built in. Only DC voltage is needed.
- Transducers will require an external 4KHz square or sine wave signal.

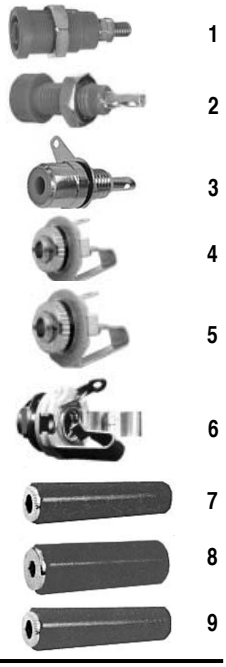
Part No.	Description	Fig.	1-9	10+
26BZ01	Buzzer; 3-6V DC; 85db; solid state; Wire leads; 0.9" x 0.7" x 0.6"	A	$1.50	$1.30
26BZ02	Buzzer; 4-8V DC; 85db; solid state; PC leads; 0.9" x 0.6" x 0.6"	A	1.75	1.50
26BZ03	Buzzer; 8-16V DC; 85db; solid state; Wire leads; 0.9" x 0.7" x 0.6"	A	1.75	1.50
26BZ04	Buzzer; 8-10V DC; 85db; solid state Wire Leads; 0.9" x 0.7" x 0.6"	A	1.75	1.35
26PZ01	Piezo indicator;2-30V DC; 80db; Wire leads Dia. = 0.9"; Ht = 0.5"	B	1.65	1.45
26PZ02	Piezo indicator; 2-30V DC; 80db; PC leads Dia. = 0.9"; Ht. = 0.45"	C	1.70	1.50
26PZ06	Piezo Indicator, 1–16V DC; 90 db @ 12V; PC Leads Dia. = 0.6"; Ht.= 0.3"	C	1.40	1.25
26TD01	Transducer; 30Vpp max; 80dbc 9Vpp; Wire leads	D	1.20	1.00
26TD02	Transducer; 30Vpp max; 80dbc 9Vpp; PC leads	E	1.20	1.00
26TD03	Transducer, 30Vpp max, 70db 3Vpp PC Leads, Dia = 12mm; Ht = 6.5mm	E	0.55	0.45

BINDING POST AND ADAPTERS

	Description	Color	Part No.	1-9	10+
1.	**5-way Binding Post**, insulated, accepts banana plug, spade lug.	Red	0701RR	$1.20	$0.95
		Black	0701RB	1.20	0.95
		Green	0701RG	1.20	0.95
		Yellow	0701RY	1.20	0.95
		Blue	0701RBY	1.20	0.95
2.	**Binding Post, Economy**	Red	0701EBR	0.45	0.40
		Black	0701EBB	0.45	0.40
3.	**Binding Post Adapter**, BNC male to Binding Posts.	–	0701BNC-BND	5.20	4.70
4.	**Binding Post Adapter**, BNC male to Single Binding Post. Will accept standard Banana Plug.	Black	070120	2.95	2.75
5.	**Banana Plug Adapter** BNC Female to Banana Plugs	–	07031069	4.50	4.25
6.	**Dual Binding Post**	Red/Black	0703YT1067	3.50	3.25

JACKS

	Description	Color	Part No.	1-9	10+
1.	**Banana Jack, insulated** round head, tin plated brass contact.	Red	07026091	$0.50	$0.45
		Black	07026092	0.45	0.40
2.	**Tip Jack, fully insulated** accepts .08" tip, supplied with nut.	Red	07026019	1.55	1.45
		Black	07026020	1.55	1.45
3.	**RCA Jack**, panel mount, round base, mounts in 0.296" hole.		0702574	1.05	0.95
4.	**Mono Jack**, sub mini, accepts 2.5mm plug, .16" mounting hole, normally closed.		0702PJM	0.75	0.70
5.	**Mono Jack**, mini, accepts 1/4" plug, mounting hole, normally closed.		0702PJ	0.70	0.65
6.	**Stereo Jack**, mini, accepts 1/4" plug, .38" mounting hole, open circuits.		0702PJS	0.95	0.90
7.	**Mono Jack**, 1/4" plastic handle	Black	0702JA71	0.55	0.50
8.	**Stereo Jack**, 3.5mm plastic handle	Black	0702JA68	0.60	0.55
	Stereo Jack, 1/4" plastic handle	Black	0702JA74	0.50	0.45



DC POWER PLUG FEMALE

2.1 mm / 2.5 mm

Part No.	Description	Price
0702CD003H	2.1 X 5.5 X 9.5 mm	$0.75
0702CD010H	2.5 X 5.5 X 9.5 mm	0.75

DC PLUG CONVERTER

- Converts 2.1mm/2.5mm X 5.5mm Male to screw terminal
- Max 25V; 4A; 30°C
- 5 Pcs/Pack

Fixed Screw

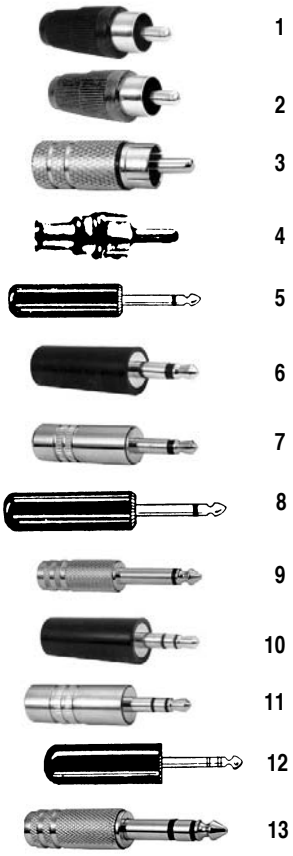
Removable Screw

Part No.	Description	Price
0702CD022	2.1 mm; Fixed Screw	$4.25
0702CD020	2.1 mm; Removable Screw	$4.25
0702CD018	2.5 mm; Fixed Screw	$4.25
0702CD019	2.5 mm; Removable Screw	$4.25

PLUGS / JACKS

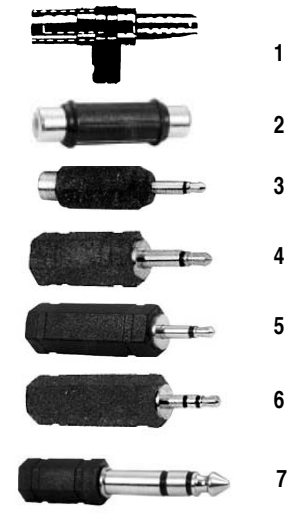
PHONO PLUGS

	Description	Part No.	1-9	10+
1.	**RCA Plug,** Plastic Handle, Color Black	0703RCAA50B	$0.40	$0.35
2.	**RCA Plug,** Plastic Handle, Color Red	0703RCAA50R	0.40	0.35
3.	**RCA Plug,** Metal Handle For 4mm Cable	0703RCAA51	0.95	0.90
4.	**RCA Plug,** Extended Handle 1 1/16" Long	0703567	0.65	0.60
5.	**Mono Plug**, 2.5mm Dia. Plastic Handle	0703PHM	0.65	0.60
6.	**Mono Plug**, 3.5mm Dia. Plastic Handle	0703PHA63	0.75	0.70
7.	**Mono Plug,** 3.5mm Dia. Metal Handle	0703PHA64	0.80	0.70
8.	**Mono Plug**, 1/4" Dia. Plastic Handle	0703PH	0.55	0.50
9.	**Mono Plug,** 1/4" Dia. Metal Handle	0703PHA70	1.10	1.05
10.	**Stereo Plug,** 3.5mm Dia Plastic Handle	0703PHA66	0.75	0.70
11.	**Stereo Plug,** 3.5mm Dia Metal Handle	0703PHA67	1.90	1.75
12.	**Stereo Plug**, 1/4" Dia. Plastic Handle	0703PHS	0.75	0.70
13.	**Stereo Plug** 1/4" Dia. Metal Handle	0703PHA73	1.25	1.15



ADAPTERS

	Description	Part No.	1-9	10+
1.	**Banana Jack Adapter** Shrouded right angle, fits Simpson instruments with recessed plugs. Available in red or black	07EZ9308R (Red)	$6.50	$6.00
		07EZ9308B (Black)	6.50	6.00
2	**RCA Jack to RCA Jack**	0705A55	0.60	0.50
3.	**RCA Jack to Mono Plug** 3.5mm	0705A60	0.75	0.70
4.	**Mono Plug** 3.5mm to Stereo Jack 3.5mm	0705A77	095	0.90
5.	**Mono Plug** 3.5mm to Stereo Jack 1/4"	0705A79	0.90	0.85
6.	**Stereo Plug** 3.5mm to Stereo Jack 1/4"	0705A80	0.70	0.65
7.	**Stereo Plug** 1/4" to Stereo Jack 3.5mm	0705A81	0.75	0.70

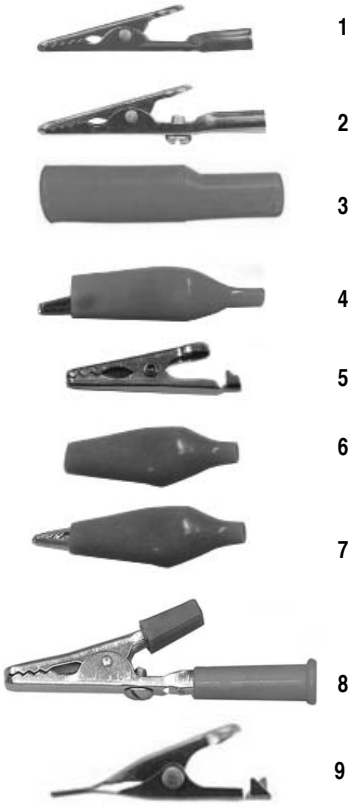


TEST HOOK

	Description	Color	Part No.	1-9	10+
1.	**Spring Loaded Hook,** ideal for building test leads, hooked on to component leads.	Red	0704MJ032R	$0.90	$0.75
		Black	0704MJ032B	0.90	0.80
2.	**EZ Hook - Test Clip,** mid size, superior quality.	Red	0704X100WR	1.85	1.75
		Black	0704X100WB	1.85	1.75

ALLIGATOR CLIPS

	Description	Color	Part No.	1-9	10-99	100+
1.	**Solder Type,** 2" long 3/8" jaw opening, accepts banana plug, equal to Mueller #60.	–	0700AC60	$0.16	$0.15	$0.14
2.	**Screw Type,** 2" long 3/8" opening, accepts banana plug equal to Mueller #60S.	–	0700AC60S	0.25	0.23	0.20
3.	**Vinyl Plastic Insulators** for #60, #60S clips.	Red Black	0700RB60 0700BB60	0.17 0.17	0.13 0.13	0.11 0.11
4.	**Alligator Clips with Insulator**, large 2" long equal to #60 clip.	Red Black	07005056 07005057	0.30 0.30	0.25 0.25	0.20 0.20
5.	**Solder Type,** 1" long, equal to Mueller #30.	–	0700AC30	0.18	0.16	0.14
6.	**Vinyl Plastic Insulators** for #30 clips.	Red Black	0700RB30 0700BB30	0.12 0.12	0.10 0.10	0.08 0.08
7.	**Alligator Clip with** insulator, small 1" long, equal to #30 clip.	Red Black	07005058 07005059	0.25 0.25	0.18 0.18	0.14 0.14
8.	**Screw Type**, 2 1/2" long, insulated handle, equal	Red Black	07005053 07005054	0.39 0.39	0.34 0.34	0.29 0.29
9	**Copper Plated** 1" Long.		0700PMC	0.40	0.35	0.30



BANANA PLUGS, TIP PLUGS

	Description	Color	Part No.	1-9	10+
1.	**Insulated Banana Plug** with set screw, solderless, 1 5/8" long.	Red Black	0703BRD 0703BBK	$0.75 0.75	$0.70 0.70
2.	**Insulated Banana Plug,** Solderless, w/o set screw.	Red Black Yellow Green	07036078 07036079 07036080 07036081	0.85 0.85 0.85 0.85	0.75 0.75 0.75 0.75
3.	**Stacking Banana Plug,**	Red Black Yellow Green Blue	070332270 070332271 070332272 070332273 070332275	0.90 0.90 0.90 0.90 0.90	0.80 0.80 0.80 0.80 0.80
4.	**Stacking Banana Plug**, insulated, w/o set screw.	Red Black	07039203R 07039203B	1.75 1.75	1.65 1.65
5.	**Dual Banana Plug,** solderless with set screw.	Red Black	07036088 07036089	2.25 2.25	1.90 1.90
6.	**Tip Plug**, solderless, .08" dia. tip fits standard tip jacks.	Red Black	07036001 07036002	1.50 1.30	1.40 1.18
7.	**Tip Probe**, Solderless Insulated, .08" dia with needle point	Red Black	07031660 07031661	0.80 0.80	0.70 0.70
8.	**Test Probe**, solderless, plastic handle, 4" long.	Red Black	07031840 07031841	1.50 1.50	1.35 1.35

Pomona Electronics BANANA PLUG
STACK-UP W/SAFETY COLLAR

Features safety collar that insulates exposed wire leads. Wires firmly held in place with internal set screw.

Part No.	Description	1-9	10+
07031825-0	Black	$1.65	$1.45
07031825-2	Red	1.65	1.45
07031825-3	Orange	1.65	1.45
07031825-4	Yellow	1.65	1.45
07031825-5	Green	1.65	1.45
07031825-6	Blue	1.65	1.45
07031825-9	White	1.65	1.45

Pomona Electronics BANANA JACK

Mounts in panels from 0.063" to .375" thick. Nickel plated lockwasher & hex nut.

Part No.	Description	1-9	10+
07021581BK	Black	$1.45	$1.40
07021581RD	Red	1.55	1.50
07021581YL	Yellow	1.45	1.40
07021581GN	Green	1.45	1.40
07021581VL	Violet	1.45	1.40
07021581BL	Blue	1.45	1.40
07021581GY	Grey	1.45	1.40

Pomona Electronics
DOUBLE BANANA JACK

Mounts in panels from .063" to .375" thick. Polycarbonate insulation.

Part No.	1-9	10+
07022269	$3.20	$3.10

Pomona Electronics BNC FEMALE TO BANANA PLUG
W/GROUND LEAD

Part No.	1-9	10+
07034684	$14.95	$13.95

E-Z-HOOK
BNC FEMALE TO STANDARD BANANA PLUG ADAPTER

Part No.	1-9	10+
07038013	$6.75	$6.45

Pomona Electronics BANANA JACK TO TEST PIN ADAPTERS

Ideal test adapter for rapid testing of hard-to-get socket connectors. Can also fit breadboards.

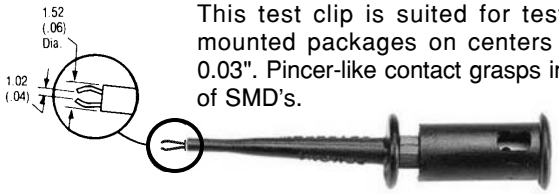
Part No.	Description	Price
074691-0	Black	$4.25
074691-2	Red	4.25

BNC – BINDING POST ADAPTER

BNC male to single binding post. Will accept standard banana plug.

Part No.	1-9	10+
070120	$2.95	$2.75

Pomona Electronics SMD GRABBER®



This test clip is suited for testing surface mounted packages on centers as small as 0.03". Pincer-like contact grasps individual legs of SMD's.

Part No.	Description	1-9	10+
07045243-0	Black	$2.95	$2.50
07045243-2	Red	2.95	2.50
07045520	Contains 10 pcs. one ea. of different colors	21.50	19.95

Pomona Electronics
SMD GRABBER® TEST CLIP WITH .025" SQUARE PIN

Pincer type contact designed for testing .050" lead pitches such as SOJ, SOIC & PLCC surface mounted packages.

Part No.	Description	1-9	10+
07045360-0	Black	$3.90	$3.75
07045360-2	Red	3.90	3.75

E-Z-HOOK
MINI-HOOK W/BANANA JACK IN PLUNGER

Fig. A

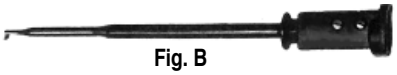


Fig. B

Part No.	Descr.	Fig.	1-9	10+
07048036R	Red	A	$5.25	$4.95
07048036B	Black	A	5.25	4.95
07048038R	Red	B	7.50	7.25
07048038B	Black	B	7.50	7.25

Pomona Electronics
PHONO ADAPTERS

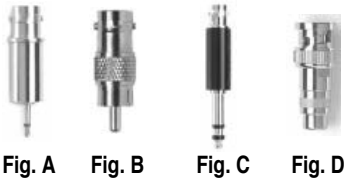


Fig. A Fig. B Fig. C Fig. D

Part No.	Fig.	Description	1-9	10+
07034267	A	BNC female to micro plug. Plug dia. 2.5 mm	$14.95	$14.50
07035319	B	BNC female to phono plug. Plug dia. 3.2 mm	6.95	6.50
07031297	C	BNC female to phone plug. Plug dia. 6.35 mm	12.75	12.25
07034054	D	BNC male to phono jack	16.75	15.95

RF ADAPTER KIT

30-IN-1 CREATES ANY POSSIBLE TYPE OF ADAPTER

The set contains two plugs (M) and two jacks (F) of each of the following types:

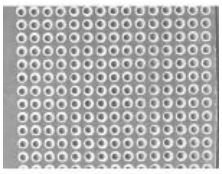
Regular Version
- N
- TNC
- SMA
- UHF
- Mini UHF
- BNC

WIFI Version
- N
- TNC
- SMA
- RP-SMA
- RP-TNC
- MMCX (1 each)
- BNC (1 each)

Plus six intermediate couplers. Adapter is created by connecting two types of required connectors with intermediate coupler.

Part No.	Description	Price
24RFADKIT	Regular Version	$94.50
24RFWIFIKIT	WIFI Version	99.90

PERF BOARDS



Ideal for prototyping work. .045" dia. holes on 0.1" center. $^{1}/_{16}$" thick material (natural phenolic). No solder pads.

Part No.	Width and Length	No. of Holes	1-9	10-99
03013399	3" x 4"	29 x 40	$1.90	$1.70
03013404	4" x 6"	40 x 60	3.75	2.95
03013427	6" x 17"	59 x 169	8.50	7.50

VECTOR WIRE WRAP TERMINALS

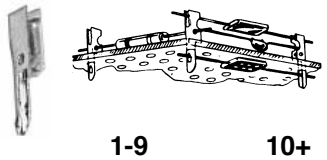
Packed 100 pieces per bag

Part No.	1-9	10+
2404T44	$13.50	$11.90
2404T49	15.90	14.95

MICRO TERMINALS

10 PER PAK

Easily press-fit into a .042 dia. hole.



Part No.	Description	1-9	10+
24041495-10	Terminal	$0.90	$0.80
24041322	Insertion Tool	4.45	3.95

BNC CONNECTOR REMOVAL TOOL

Removes BNC connectors in high density or hard-to-reach locations.

Part No.	Size	1-9	10+
0602HT2206	6"	$7.95	$6.95
0602HT2212	12"	9.90	8.90

Pomona Electronics BANANA PLUGS

SET OF 2 – BLACK AND RED

Part No.	1-9	10+
07031325-02	$3.95	$3.50

Pomona Electronics DOUBLE BANANA PLUGS

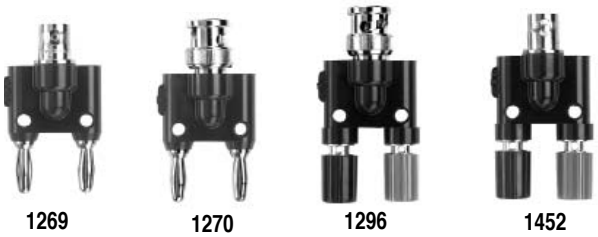
Part No.	Description	Price
0703MDP	With Wire Guide	$2.75
0703MDP-ST	With Solder Turret Terminals	4.75
07031330	Solderless	3.00
07031330-ST	Solderless with Solder Turret Terminals	4.25

Pomona Electronics DUAL BINDING POST

One binding post red, and the other black. Mounting plate black.

Part No.	1-9	10+
07034243-0	$6.95	$6.50

Pomona Electronics BNC ADAPTERS



Part No.	Description	Price
07011269	BNC Female to Double Stacking Banana Plug	$7.95
07011270	BNC Male to Double Stacking Banana Plug	10.95
07011296	BNC Male to Binding Posts Stackable	13.90
07011452	BNC Female to Binding Posts Stackable	10.90

Pomona Electronics MINIGRABBER® TEST CLIP WITH BANANA JACK

Banana jack built into plunger.

Part No.	Color	1-9	10+
07044723-0	Black	$5.20	$4.95
07044723-2	Red	5.20	4.95

SOLDER TYPE D-SUBMINIATURE CONNECTORS

SOLDER TYPE CONTACTS

Part No.	Description		Price
2400DB9P	9 contact plug	(RS449)	$0.50
2400DB9S	9 contact socket	(RS449)	0.55
2400DB15P	15 contact plug	(RS422)	0.65
2400DB15S	15 contact socket	(RS422)	0.75
2400DB25P	25 contact plug	(RS232)	0.85
2400DB25S	25 contact socket	(RS232)	0.80
2400DB37P	37 contact plug	(RS449)	1.35
2400DB37S	37 contact socket	(RS449)	1.45
2400DB50P	50 contact plug	(RS422A)	1.95
2400DB50S	50 contact socket	(RS422A)	2.35

D-SUBMINIATURE HOODS

METAL:

Part No.	Contacts	1-9	10+
2400DBHM9	9	$1.05	$0.95
2400DBHM15	15	1.15	1.05
2400DBHM25	25	2.95	2.75

PLASTIC:

Part No.	Contacts	1-9	10+
2400DBHP9	9	$0.45	$0.42
2400DBHP15	15	0.45	0.42
2400DBHP25	25	0.45	0.42
2400DBHP37	37	0.75	0.70
2400DBHP50	50	0.80	0.75

PIN EXTRACTOR

Plunger (pushing) style pin extractor for pushing pins out from behind the connector blocks. For contact sizes 16-20. Length of tool 3".

Part No. 03R5926 • Price: $12.95

WALL PLATES

Stainless steel wall plates.

Part No.	Description	Prices
24WP1	Single 1/2" hole	$1.95
24WP2	Dual 1/2" hole	1.95
24WP3	Single 5/8" hole	1.95
24WP5	Blank	1.95
24WP6	Single DB25 hole	1.95
24WP7	Dual DB25 hole	1.95
24WP8	Single DB9 hole	1.95
24WP9	Dual DB9 hole	1.95

FEMALE CRIMP TERMINALS

- Mates with .025" sq. posts.
- Fits into Crimp Terminal Housings shown below

- Mates with .025" sq. posts
- Tin Plating
- Fits into Crimp Terminal Housings

Part No.	1-9	10+
2404FCP	$0.07	$0.06

CRIMP TERMINAL HOUSING

.100' center, mates with male headers with .025" sq. posts.

Part No.	No. of Posit.	1-9	10+
240303	3	$0.35	$0.30
240304	4	0.48	0.42
240305	5	0.55	0.46
240306	6	0.60	0.50
240307	7	0.70	0.60
240309	9	0.80	0.70

MALE HEADERS

Single row. .025" sq, posts on .1" center.

Part No.	No. of Posts	1-9	10+
240202S	2	$0.12	$0.10
240204S	4	0.12	0.10
240208S	8	0.24	0.22
240210S	10	0.30	0.28
240220S	20	0.60	0.55
240230S	30	0.70	0.65
240236S	36	0.75	0.70

MINI JUMPER

10 PCS/ BAG

2 pin.

Fig. A

Fig. B

Part No.	Description	Fig.	Price
24SHRTBAR	Open Top	A	$0.40
24SHRTEXTBAR	Close Top Extended Length	B	1.00

MALE HEADERS

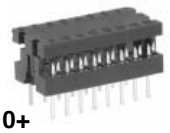
DUAL ROW

.025" sq. posts on 0.1" centers.

Part No.	No. of Posts	1-9	10+
240202D	2	$0.16	$0.14
240204D	4	0.20	0.18
240206D	6	0.25	0.22
240208D	8	0.30	0.25
240210D	10	0.30	0.25
240216D	16	0.50	0.45
240220D	20	0.65	0.60
240224D	24	0.75	0.70
240234D	34	0.95	0.90
240240D	40	1.20	1.10
240250D	50	1.50	1.30

INSULATION DISPLACEMENT CONNECTORS

DIP PLUG CONNECTORS



1" spacing. Mates with standard 14, 16, 24 and 40 Pin Dip Sockets.

Part No.	No. Of Contacts	1-9	10+
24IDC14	14	$0.60	$0.55
24IDC16	16	0.70	0.65
24IDC20	20	0.90	0.80
24IDC24	24	1.10	0.95
24IDC28	28	1.45	1.35
24IDC40	40	1.30	1.20

SOCKET CONNECTORS

Mates with two rows of .025" square on patterns of .1" centers and shielded receptacles.

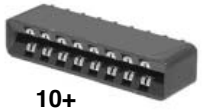
Part No.	No. Of Contacts	1-9	10+
2400S10	10	$0.80	$0.60
2400S16	16	0.80	0.65
2400S20	20	0.80	0.65
2400S26	26	0.80	0.70
2400S34	34	0.85	0.75
2400S40	40	1.35	1.25
2400S50	50	1.45	1.36
2400S60	60	1.55	1.45

D-SUBMINIATURE CONNECTORS

Metal shell

Part No.	No. Of Contacts	Style	1-9	10+
2400DSM9	9	Male	$1.60	$1.50
2400DSF9	9	Female	1.75	1.65
2400DSM15	15	Male	1.95	1.85
2400DSF15	15	Female	1.95	1.85
2400DSM25	25	Male	2.20	2.10
2400DSF25	25	Female	2.20	2.10
2400DSM37	37	Male	3.45	3.35
2400DSF37	37	Female	3.95	3.85

CARD-EDGE CONNECTORS



Mates with double sided 1/6" PC Board with contact fingers on 1" centers.

Part No.	No. Of Contacts	1-9	10+
2400C20	20	$0.75	$0.65
2400C26	26	0.85	0.75
2400C34	34	1.05	0.95
2400C40	40	1.45	1.35
2400C50	50	1.85	1.65

IDC CRIMPING FIXTURE

Manual, easy-to-use connector crimper

Part No. 24IDCCF • Price: $13.40

CALL FOR QUOTES ON CUSTOM CABLE SUB ASSEMBLIES

MULTI-COLOR RAINBOW RIBBON CABLE

STANDARD 10 COLOR REPEAT SEQUENCE

Part No.	No. of Conductors	Length	Price
27000R16	16	10'	$6.00
27001R16	16	100'	65.00
27000R24	24	10'	7.50
27001R24	24	100'	66.00
27000R25	25	10'	7.75
27001R25	25	100'	70.00
27000R40	40	10'	12.00
27001R40	40	100'	120.00
27000R50	50	10'	20.00
27001R50	50	100'	125.00

GRAY FLAT RIBBON CABLE

- Ideal for IDC connectors
- Spacing 0.05"; 28AWG (7x36)
- Stranded copper wire

Part No.	No. of Conductors	Length	Price
27000G16	16	10'	$3.25
27001G16	16	100'	25.00
27000G25	25	10'	4.50
27001G25	25	100'	35.00
27000G40	40	10'	8.00
27001G40	40	100'	59.00

FLAT RIBBON CABLE CUTTER

- Useful for cutting ribbon cable
- Cutter, clamper, wire loop and steel wire cutter
- Cuts copper up to 30mm in width

Part No.	1-9	10+
0602HT502C	$7.75	$6.95

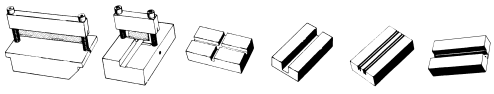
PANAVISE IDC BENCH PRESS AND ACCESSORIES

MODEL 505

This manual IDC Bench Assembly Press is a rugged, practical assembly tool designed for low-volume termination of various IDC connectors on flat ribbon cable. Assembly base and standard platen included.

Part No.	Description	Price
03PAN505	IDC Bench Press	$199.00

ACCESSORIES:



507 508 510 511 512 513

Part No.	Description	Prices
06PAN507	Flat Ribbon cable cutter	$59.99
06PAN510	Female socket connector Installation Base Plate	26.99
06PAN511	Card edge connector Installation Base Plate	26.99
06PAN512	Dip plug connector Installation Base Plate	26.99
06PAN513	D-Sub connector Installation Base Plate	26.99

RF ADAPTER KIT

30-IN-1 CREATES ANY POSSIBLE TYPE OF ADAPTER

The set contains two plugs (M) and two jacks (F) of each of the following types:

Regular Version
- N
- TNC
- SMA
- UHF
- Mini UHF
- BNC

WIFI Version
- N
- TNC
- SMA
- RP-SMA
- RP-TNC
- MMCX (1 each)
- BNC (1 each)

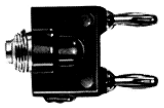
Plus six intermediate couplers. Adapter is created by connecting two types of required connectors with intermediate coupler.

Part No.	Description	Price
24RFADKIT	Regular Version	$94.50
24RFWIFIKIT	WIFI Version	99.90

Pomona Electronics

UNIVERSAL ADAPTER KITS

Model 5698 and 5748 Adapter Kits allow users to make their own adapter combinations, such as SMA to BNC or BNC to double banana plugs. Adapter ends are joined with coupling nuts. Simply choose your own combination. All connectors feature gold plated center contacts and silver plated bodies.



MODEL 5698 ADAPTER KIT

Contains 2 pcs. each: BNC Male, BNC Female, TNC Male, TNC Female, SMA Male, SMA Female, "N" Male, "N" Female, four intermediate Couplers, one Double Banana Plug and one Double Banana Jack.

MODEL 5748 ADAPTER KIT

Contains 2 pcs each: BNC Male, BNC Female, TNC Male, TNC Female, SMA Male, SMA Female, "N" Male, "N" Female, UHF Male, UHF Female, Mini UHF Male, Mini UHF Female, "F" Male, "F" Female, RCA Male, RCA Female, six intermediate Couplers, one Double Banana Plug, one Double Banana Jack and one Sampler.

UNIVERSAL CABLE

This cable allows the user to make cable assemblies from any of the coaxial adapters in the Model 5698 and Model 5748 Adapter Kits. Individual connectors can be threaded onto the coupling nut on each end of the cable for additional utility.

Part No.	Description	Price
05P5698	Model 5698 Ad apter Kit	$125.95
05P5748	Model 5748 Adapter Kit	295.00
05P5749-36	Universal Cable 36" Long	11.75
05P5749-72	Universal Cable 72" Long	12.95

F CONNECTORS

10/BAG

Fig. A

Fig. B

Fig. C

Fig. D

Part No.	Description	Fig.	1-9	10+
2400F59A	Male "F" with attached crimp ring for RG-59U cable.	A	$2.50	$2.25
2400F59ALB	Male "F" with long crimp ring for RG-59 cable	B	3.25	2.95
2400F56ALB	Male "F" with long crimp ring for RG-6U cable	B	2.50	2.25
2400F59B	Male "F" with separate ring for RG-59U cable	C	2.50	2.25
2400F56B	Male "F" wth separate ring for RG-6U cable	C	2.50	2.25
2400F56BT	Male "F" twist on for RG-6U cable	D	2.50	2.25
2400F59BT	Male "F" twist on for RG59/AU cable	D	2.50	2.25

F ADAPTERS

Fig. AA

Fig. BB

Fig. CC

Fig. DD

Fig. EE

Part No.	Description	Fig.	1-9	10+
2400F81	Double "F" Female Connector	AA	$0.35	$0.25
2400F03	"F" Female to Push on Male	BB	0.65	0.55
2400F04	Double Male "F" Adaptor	CC	0.75	0.65
2400F06	"F" Female to RCA plug	DD	0.95	0.85
2400F07	"F" Male to RCA jack	EE	0.95	0.85

CATV POCKET CONTINUITY TONE TESTER

RG59 style coax cable Continuity Tester – accurate up to 5,000 ft. Identifies cables in an MDU, and detects troublesome short circuits.
- Loud tone identifies line carrying signal
- LED indicates splitters, DC shorts and other self grounding devices in cable
- Right angle male F59 push-on connector for confined areas
- Compact, light weight. 5", 2 oz.

Part No.	Description	Price
01JPT300	Pocket coax cable continuity tester	**$19.95**

CONNECTOR TOOL FOR "F" TYPE

Connector tool is designed to simplify and improve the assembly of twist on or crimp-on "F" type connectors. The ergonomic design will allow easy termination with minimal use of force. A must tool for cable technician. Includes step-by-step directions on how to use the tool.

Part No.	Description	Price
24FCT	F Connector Tool	4.95

BNC CO-AXIAL CONNECTORS

TWIST-ON

- 1 Piece Construction
- Crimpless and Solderless
- Field Installable
- Strip the Wire and twist on

Part No.	Cable Type	1-9	10+
2400BNC9051	RG58	$1.50	$1.30
2400BNC9050	RG59 and 62	1.50	1.30
2400BNC9059	RG58 Teflon	2.35	1.85
2400BNC9206	RG58 Thin Net	2.75	2.20

CRIMP TYPE

- 2 Piece Construction
- Solderless

Part No.	Cable Type	1-9	10+
2400BNC9001	RG58	$1.75	$1.50
2400BNC9000	RG59	1.45	1.35
2400BNCRG62	RG62	1.20	1.10
2400BNC9204	RG58 Teflon	2.25	1.85
2400BNC9207	RG58 Thin Net	2.25	1.85

CRIMP TYPE

- 3 Piece Construction
- Crimp Center Pin
- Crimp Braid

Part No.	Cable Type	1-9	10+
2400BNC9101	RG58	$1.25	$1.05
2400BNC9100	RG59 and 62	1.25	1.05
2400BNC9205	RG58 Teflon	2.50	2.25
2400BNC9208	RG58 Thin Net	1.80	1.45

STANDARD SOLDER TYPE

Part No.	Cable Type	1-9	10+
2400BNC9020	RG59 and 62 (UG260)	$1.95	$1.40
2400BNC9021	RG58 (UG88)	1.50	1.20

BNC TERMINATOR DUMMY LOAD 1.5WC 1%

Part No.	Value	1-9	10+
2400BNC9007	75 ohms	$2.95	$2.10
2400BNC9008	50 ohms	3.50	2.50
2400BNC9093	93 ohms	3.00	2.15

BNC FEMALE CONNECTOR

- Right angle PC Mount
- 50 ohms

Part No.	1-9	100+
2400BNCRT	$1.75	$1.50

BNC CHASSIS MOUNTS

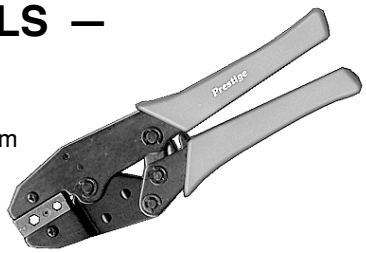
Fig.A

Fig. B

Fig. C

Part No.	Type	Fig.	1-9	10+
2400BNC8450	UG-290U	A	$2.00	$1.90
2400BNC8460	UG-1094U	B	1.40	1.00
2400BNC8470	UG-492	C	4.25	3.90

CRIMPING TOOLS — RACHET TYPE



- Full Cycle Rachet Mechanism
- High Quality Steel
- Each Tool Comes Complete with Crimp Die

Part No.	Cable Size	Description	Prices
06028856	RG6, RG8 RG59, RG62	Crimps our BNC/TNC 3-Pc connectors	$36.95
06028857	RG58U, RG58AU RG139	Crimps our BNC/TNC 3-Pc connectors	$32.95
06028789	RG58, RG59 RG62	Crimps 2 and 3 Piece BNC and TNC connectors with standard crimp rings by AMP, Amphenol, Kings	$32.95

UNIVERSAL CRIMPING TOOL

RATCHET TYPE

- Deluxe 9" tool of 3mm thickness
- Interchangeable die sets
- Crimps RJ-11, RJ-12, RJ-45 connectors
- Crimps BNC connectors using RG58, RG59, RG6 coax
- Crimps F-connectors using RG59, RG6 coax
- Crimps insulated and non-insulated terminals

Part No.	Description	1-9	10+
24CTFRAME	Universal Tool W/O Dies	$19.95	$18.95
24CT6P	Die for RJ11 (4P, 2C; 4P, 4C; 6P, 4C; 6P, 6C)	8.90	8.25
24CT8P	Die for RJ45 (8P, 8C)	8.90	8.25
24CTHT301C	Die for BNC Connector Using RG58, RG59, RG6	8.90	8.25
24CT1328	Die for F Connector Using RG59, RG6	8.90	8.25
24CT336H	Die For Insulated Terminals 10 to 22 AWG	8.90	8.25
24CT236C	Die For Non-Insulated and Inter-Locking Terminals 10 to 20 AWG	8.90	8.25

BNC – BINDING POST ADAPTER

BNC Male to dual Binding Posts.
Standard 0.75" spacing between posts.

Part No.	1-9	10+
0701BNC-BND	$5.20	$4.70

BNC – DUAL BANANA ADAPTER

BNC Female to dual Banana Plug. Standard 0.75" spacing between plugs.

Part No.	1-9	10+
07031069	$4.50	$4.25

BNC ADAPTERS

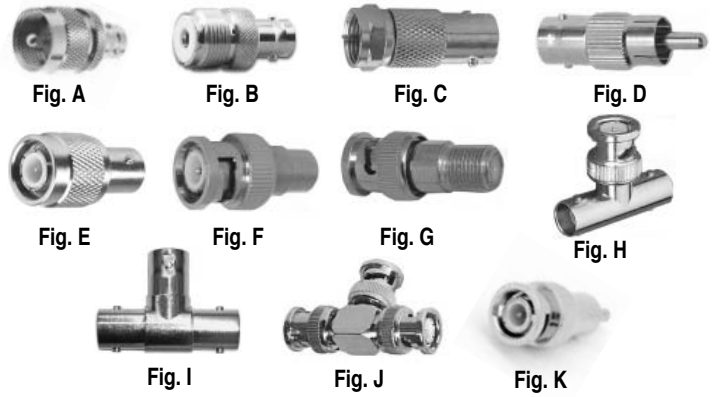


Fig. A Fig. B Fig. C Fig. D Fig. E Fig. F Fig. G Fig. H Fig. I Fig. J Fig. K

Part No.	Description	Fig.	1-9	10+
2400BNC8120	BNC Female to UHF Male	A	$2.75	$2.25
2400BNC7365	BNC Female to UHF Female	B	3.50	3.00
2400BNC8100	BNC Female to “F” Male	C	2.70	2.50
2400BNC8110	BNC Female to RCA Male	D	2.25	1.75
24TNC3057	BNC Female to TNC Male	E	2.35	2.25
2400BNC7510	BNC Male to RCA Female	F	1.75	1.65
2400BNC7500	BNC Male to “F” Female	G	1.95	1.80
2400BNC8140	BNC “T” 2 Female-1 Male	H	1.75	1.65
2400BNC8141	BNC “T” 3 Female	I	1.95	1.75
2400BNC8142	BNC “T” 3 Male	J	5.50	4.50
2400BNCCBNC32	BNC Male to RCA Male	K	1.50	1.25

F ADAPTERS

Fig. AA Fig. BB Fig. CC Fig. DD Fig. EE

Part No.	Description	Fig.	1-9	10+
2400F81	Double “F” Female Connector.	AA	$0.35	$0.25
2400F03	“F” Female to Push on Male.	BB	0.65	0.55
2400F04	Double Male “F” Adaptor.	CC	0.75	0.65
2400F06	“F” Female to RCA plug.	DD	0.95	0.85
2400F07	“F” Male to RCA jack.	EE	0.95	0.85

TERMINAL BARRIER STRIPS

DUAL ROW

These allow users to connect wires to separate screws without changing factory wiring. .375" spacing.

Part No.	Description	1-9	10+
2405BST02	2 Positions / 4 Screws	$0.65	$0.60
2405BST04	4 Positions / 8 Screws	1.05	0.95
2405BST05	5 Positions / 10 Screws	1.95	1.85
2405BST06	6 Positions / 12 Screws	1.60	1.50
2405BST08	8 Positions / 16 Screws	2.20	2.10
2405BST10	10 Positions / 20 Screws	2.75	2.60

TERMINAL BARRIER STRIPS

PC TYPE

- Pitch .375", low profile single row
- PC lead for each screw, 12-22 AWG

Part No.	Description	1-9	10+
2405TS02	2 Positions	$0.70	$0.65
2405TS04	4 Positions	0.95	0.90
2405TS06	6 Positions	1.45	1.40
2405TS08	8 Positions	2.50	2.25

AMPLIFIER – UHF/VHF/FM

1 WAY - 25 DB AMPLIFIER

- Switchable FM Trap
- 75 ohm input, 75 ohm output
- Lightening Protection
- Low Noise
- Noise Figure: 5.4 - 6.2 db UHF - 14 db
- FM Trap Attenuation 20 db (95-108 MHz)

Part No.	Price
2400AP4901	$27.50

CO-AXIAL SPLITTERS

- MATV/TV
- Die Cast
- Indoor/Outdoor
- 5-900 MHz

Part No.	Description	Insertion Loss	Isolation	1-9	10+
2400SP4120	2-Way Splitter	3.5 db	20 db	$1.50	$1.20
2400SP4130	3-Way Splitter	6.5 db	20 db	2.35	1.95
2400SP4140	4-Way Splitter	6.5 db	30 db	2.60	2.25

SOLDERLESS TERMINALS

PACKAGED 10 PER BAG

Fig. A

Fig. B

Fig. C

Fig. D

Wire Size 18-22AWG

Part No.	Description	Size	Fig.	Prices/Pak 1-9	10+
23108276	Female Insulated	0.187"x0.02"	A	$2.50	$2.30
23108277	Female-Insulated	0.25"x0.32"	A	3.25	2.95
23108273	Female-Non Insulated	0.25"x0.32"	A	1.75	1.50
23108286	Male Insulated	0.187"x0.02"	B	2.75	2.55
23108282	Male-Non Insulated	0.25"x0.32"	B	1.75	1.60
23108209	Ring Tongue Insulated #6		C	2.50	2.25
23108210	Ring Tongue Insulated #8		C	2.50	2.25
23108211	Ring Tongue Insulated #10		C	2.75	2.50
23108227	Block Spade Insulated #6		D	2.50	2.25
23108228	Block Spade Insulated #8		D	2.50	2.25
23108245	Flanged Block Spade #6		D	3.75	3.25

FAHNESTOCK SPRING CLIP

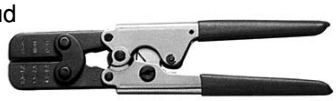
PACKAGED 10/PACK

Brass and nickel plated 5/16"W x 3/4"L.

Part No.	1-9	10+
2330FC10	$2.15	$1.95

CRIMPING TOOL FOR INSULATED TERMINALS

- Crimps solderless terminals stud size #6, #8 and #10
- Wire size 12 AWG to 22 AWG
- Size: 9" x 2.0"



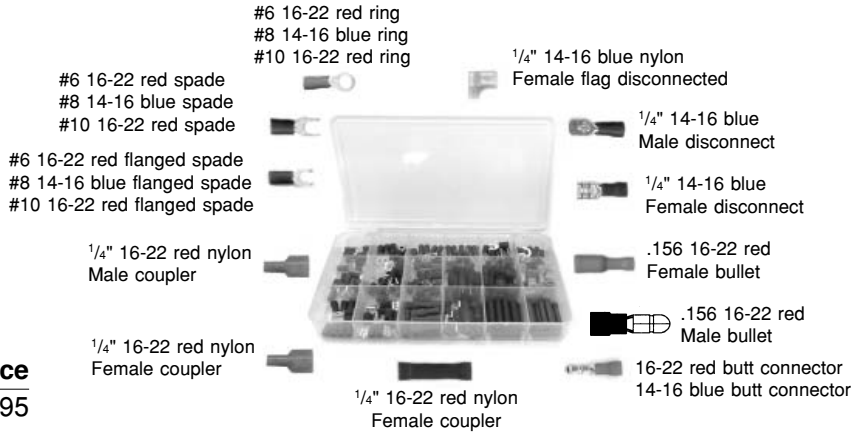
Part No.	1-9	10+
2330HT303	$15.90	$14.90

INSULATED SOLDERLESS TERMINAL AND CONNECTOR KIT

ONLY $11.95

- 180 total pieces
- 10 pieces each type as illustrated
- 8" x 4" clear hinged case

Part No.	Description	Price
3200TRKIT	Solderless Terminal Kit	$11.95



TERMINAL BLOCKS

Figure 1

Figure 2

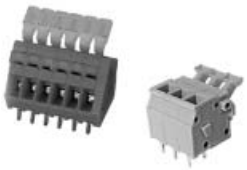


Figure 3

Nickel plated brass terminals. Securely hold the wire in place, 2 to 4 terminal blocks. End to end stackable, 0.2" pin spacing. Rated voltage 300 V @ 15A. 12-22 AWG wire.

Part No.	Fig.	Terminals	Type	1-9	10+
2405TB1	1	2	Vertical	$0.70	$0.65
2405TB2	1	3	Vertical	1.00	0.90
2405TB3	1	4	Vertical	1.40	1.20
2405TB7	2	2	45 Angle	0.95	0.90
2405TB8	2	3	45 Angle	1.40	1.30
2405TB9	2	4	45 Angle	2.75	2.50
SCREWDRIVERLESS SERIES					
2405TB14	3	2	Vertical	1.05	1.00
2405TB16	3	4	Vertical	1.90	1.85

TERMINAL STRIPS

10 PIECES PER BAG

Standard, tinplated steel lugs.

Part No.	Description	Prices/Pak 1-9	10+
2320800	1 lug, sep. mtg. lug	$2.95	$2.50
2320803	2 lug, com. mtg. lug	3.20	2.80
2320808	2 lug, sep. mtg. lug	3.80	3.40
2320809	3 lug, com. mtg. lug	3.90	3.50
2320813	3 lug, sep. mtg. lug	4.95	4.50
2320818	4 lug, sep. mtg. lug	5.50	5.25
2320817	5 lug, com. mtg. lug	6.50	6.25
2320824	5 lug, 2 sep. mtg. lugs	6.75	6.50
2320822	6 lug, 2 com. mtg. lugs	7.50	7.25

CRIMPING TOOL SET

- 8" modular crimping tool.
- Cuts, strips and crimps.
- Crimps RJ45, RJ12, RJ11, 6P6C offset, DEC plug, 4P4C, 4P2C.
- Includes 90 modular plugs: 40–4P4C plugs, 30–6P6C, 20–8P8C.
- Hard blow molded carrying case 8" x 10.5" x 2"; **Weight**: 2.1 lbs.

Part No.	Price
24CTS2000B	$89.90

CRIMPING TOOL SET

- 7" tool, frame made of steel, light weight, compact, durable and with ratchet mechanism.
- Crimps: RJ45 (8P), RJ12 (6P), RJ11.
- Includes universal wire stripper 0602HT501.
- Includes 60 modular plugs: 30–8P8C; 30–6P6C.
- Hard blow molded case.

Part No.	Price
24CTS2568AR	$44.95

CRIMPING TOOLS FOR MODULAR PLUGS

- Cuts and strips
- Crimp RJ11/RJ12/RJ45
- Insulated grip

Part No.	Description	Price
24CTHT210	RJ45 (8P8C) Only	$10.95
24CTHT546	RJ11/12 (6P 6C) & Handset (4P 4C)	15.95
24CTHT599	RJ11/RJ12 (6P 6C) & RJ45 (8P 8C)	19.95
24CTHT568R	RJ11/12 (6P 6C) & RJ45 (8P 8C)/Ratchet	26.95

REMOTE TELEPHONE & DATA LINE TESTER

For testing *remote* continuity of telephone and data lines using 4, 6 and 8 conductor plugs (RJ_{11} and RJ_{45}). Tests up to 10,000 ft. 1 sec. test time 5 mA max. 9V battery included.

Part No. 34DT02 • Price : $65.00

PUNCHDOWN TOOL

- Impact type (24PDT4)
- Adjustable impact pressure
- Suitable for 66 and 110 terminal blocks

Part No.	Description	1-9	10+
24PDT4	Impact Tool	$25.95	$23.95
24PDT1	Non Impact Tool	9.50	7.50
24PDB-HT14	Blade for 66 Block	6.95	5.95
24PDB-HT14B	Blade for 110 Block	6.95	5.95

UNIVERSAL CRIMPING TOOL

RATCHET TYPE

- Deluxe 9" tool of 3mm thickness
- Interchangeable die sets
- Crimps RJ-11, RJ-12, RJ-45 connectors
- Crimps BNC connectors using RG58, RG59, RG6 coax
- Crimps F-connectors using RG59, RG6 coax
- Crimps insulated and non-insulated terminals

Part No.	Description	1-9	10+
24CTFRAME	Universal Tool W/O Dies	$19.95	$18.95
24CT6P	Die for RJ11 (4P, 2C; 4P, 4C; 6P, 4C; 6P, 6C)	8.90	8.25
24CT8P	Die for RJ45 (8P, 8C)	8.90	8.25
24CTHT301C	Die for BNC Connector Using RG58, RG59, RG6	8.90	8.25
24CT1328	Die for F Connector Using RG59, RG6	8.90	8.25
24CT336H	Die For Insulated Terminals 10 to 22 AWG	8.90	8.25
24CT236C	Die For Non-Insulated and Inter-Locking Terminals 10 to 20 AWG	8.90	8.25

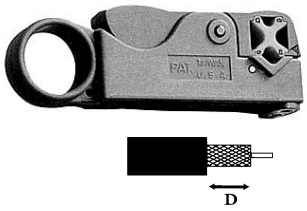
UNIVERSAL STRIPPING TOOL – 4"

Strips outer insulation of flat and round multiconductor cable from 3.5mm – 9mm max. It can even handle irregular out-shape of insulation.

Part No.	Price
0602HT501	$8.75

COAX CABLE STRIPPER

- Strips the coaxial jacket and inner conductor in one operation
- 2 blade model
- Suitable for RG58/59/62/6



D = 4, 6, 8, 12mm

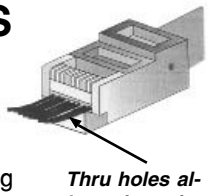
Part No.	Price
0602HT332	$10.50

CRIMP TOOL & LAN TESTER + RJ45 PLUGS (100)

This package includes crimping tool, cable/LAN tester, wire stripper, and 100 pcs of RJ45 modular plugs

Part No. 32CLRJ • Price: $12.95

EZ-RJ45® CONNECTORS



New patented EZ-RJ45® connector simplified twisted pair terminations by allowing wires to be inserted through the connector and out the front. This allows technician to easily verify the proper wiring sequence.

Thru holes allow wire pairs to be inserted.

- Easy to verify wire sequence before crimping
- Simple one piece design
- More reliable, higher performance
- Compatible with most RJ45 style open ended crimp tools except for AMP.
- Use in Cat 5, 5E, 6 compliant data networks.

Part No.		1-9	10+
24EZCAT5	CAT5, CAT5E; Regular	$0.65	$0.60
24EZCAT6	CAT6; Regular	0.80	0.75
24EZCAT6SN	CAT5E, 6; Shielded with internal ground	2.20	1.95
24EZCAT6SX	CAT5e, 6; Shielded with external ground	2.50	1.95

CRIMP TOOL EZ-RJ45®

Designed to quickly crimp and trim extended wires of the EZ-RJ45® connector (CAT5/5E and CAT6) in one easy simple operation.

- Ratcheted straight action ensures uniform crimp
- Built in wire cutter and stripper for silver satin
- All steel frame with black oxide finish

Part No.	Description	Price
24EZCT1	Regular Model	$65.90
24EZCT2	Heavy Duty Model	73.95

PLATINUM TOOLS® EZ-SNAP JACKS™

CAT5 E

CAT6

No punchdown tool needed for wall jacks. Wire guide ensures pairs stay in proper order for fast easy termination. Just prep cable, insert with proper order, snap!

Order No	Description	Price
24EZSJ2	CAT5E, White	**$3.95**
24EZSJ3	CAT5E, Blue	**3.95**
24EZSJ4	CAT5E, Ivory	**3.95**
24EJSJ22	CAT6, Blue	**4.50**
24EZSJ21	CAT6, White	**4.50**
24EJSJ23	CAT6, Ivory	**4.50**

MULTI-COLORED FIELD INSTALLABLE KEYSTONE JACKS

Suitable for 22 to 26 AWG wire, stranded or solid. 30 micro inch gold-plated contacts.

Part No.	Description	Price
34KJ02	6 conductor – black, cat. 3 & 4	3.50
34KJ20	8 conductor – black, cat. 5	5.95
34KJ	8 conductor – white, cat. 5	5.95

MODULAR PLUGS

10pcs /Pak

Part No.	Description	Price/Pak
24TMP4	RJ11-4; 6P4C Flat Wire	$0.70
24TMP4TST	RJ11-4; 6P4C Twisted Stranded Wire	1.45
24TMP4TSL	RJ11-4; 6P4C Twisted Solid Wire	1.65
24TMP6	RJ11-6; 6P6C Flat Wire	0.90
24TM6TSL	RJ11-6; 6P6C Twisted Solid Wire	1.95
24TMP8	RJ45-8; 8P8C Flat Wire	1.45
24TMP8TST	RJ45-8; 8P8C UTP Stranded	1.45
24TMP8TSL	RJ45-8; 8P8C UTP Solid	1.65
24TMP8CAT5	RJ45-8; 8P8C UTP CAT 5E Solid	3.95

MODULAR CORDS

For phones, modems or networks. Standard modular plug at each end 7', 15' and 25' lengths.

Part No.	Description		Price
24TMC4-7ST	7' RJ11	4 Conductor Straight	$0.90
24TMC4-7RV	7' RJ11	4 Conductor Reversed	0.90
24TMC4-25ST	25' RJ11	4 Conductor Straight	2.95
24TMC4-25RV	25' RJ11	4 Conductor Reversed	2.95
24TMC6-7ST	7' RJ11	6 Conductor Straight	2.95
24TMC6-7RV	7' RJ11	6 Conductor Reversed	2.95
24TMC6-25ST	25' RJ11	6 Conductor Straight	3.95
24TMC6-25RV	25' RJ11	6 Conductor Reversed	3.95
24TMC8-7ST	7' RJ45	8 Conductor Straight	2.95
24TMC8-7RV	7' RJ45	8 Conductor Reversed	2.95
24TMC8-25ST	25' RJ45	8 Conductor Straight	4.95
24TMC8-25RV	25' RJ45	8 Conductor Reversed	4.95

KEYSTONE JACKS

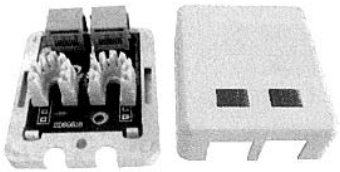
CAT 5E AND CAT 6

- For TSB 568A or 568B (AT&T 258A)
- Meets EIA/TIA CAT5E / CAT6 standard
- 4 layer PCB
- 110 type IDC termination
- Right angle horse-shoe type

Part No.	Description	Price
34KJ60	CAT 5E; Beige	$3.25
34KJ61	CAT 5E; Yellow	3.25
34KJ62	CAT 5E; Green	3.25
34KJ63	CAT 5E; Blue	3.25
34KJ70	CAT 6; Beige	3.95
34KJ71	CAT 6; Yellow	3.95
34KJ72	CAT 6; Green	3.95
34KJ73	CAT 6; Blue	3.95

SURFACE MOUNT BOXES

CAT 5E / CAT 6



- 110 style
- Ivory color

Part No.	Description	Price
34KJ50	1 — CAT 5E RJ45 Jack	$4.50
34KJ51	2 — CAT 5E RJ45 Jacks	7.50
34KJ53	1 — CAT 6 RJ45 Jack	4.95
34KJ54	2 — CAT 6 RJ45 Jacks	8.95

RJ11 JACK

BREADBOARD ADAPTER

RJ11-6P6C jack mounted on a circuit board for easy breadboarding.

Part No.	1-9	10+
97BRD480	$5.95	$4.95

MODULAR WALL PLATES

Standard finish

Part No.	Description	Prices
24MWP1	Single 4 contact	$1.50
24MWP2	Single 6 contact	1.95
24MWP3	Single 8 contact	2.40
24MWP4	Dual 4 contact	1.95
24MWP5	Dual 6 contact	2.40
24MWP6	Dual 8 contact	3.40

TELEPHONE JACKS

PC TYPE

Fig. A

Fig. B

Part No.	Description	Fig.	1-9	10+
24TJPC6	RJ12 – 6P6C / Top Entry	A	$0.90	$0.85
24TJPC8	RJ45 – 8P8C / Top Entry	A	0.95	0.90
24TJPCRT6	RJ12 – 6P6C / Side Entry	B	0.90	0.85
24TJPCRT8	RJ45 – 8P8C / Side Entry	B	0.95	0.90

COILED HANDSET REPLACEMENT CORDS

Color: Beige, choose 15', 25' and 50'.

Part No.	Description	Prices
24TCHC1	15' coiled cord	$1.95
24TCHC3	50' coiled cord	6.95

MODULAR CORD COUPLER

Back-to-back modular jacks to connect two modular cables.

Part No.	Description	Prices
24TMCC1	4 conductor (reverse)	$0.95
24TMCC2	6 conductor (straight)	1.10
24TMCC5	6 conductor (reverse)	1.10
24TMCC4	8 conductor (straight)	1.95
24TMCC3	8 conductor (reverse)	1.95

MODULAR T-ADAPTOR

Provides two jacks from one outlet.

Part No.	Description	Prices
24TMTA2	6 conductor st. thru	1.25
24TMTA3	8 conductor st. thru	1.50

FISH TAPE – FOR FISHING CABLE

PREMIUM BRAND

Runs through walls and hard to reach areas. Metal tapes are 1/8" wide. Handgrip with trigger for easy rewinding.

Part No.	Description	Price
29FT1	Metal Fish Tape 50'	$45.95
29FT2	Metal Fish Tape 100'	56.95

FISH TAPE

ECONOMY BRAND

100 ft. length. useful for fishing wire through walls. handgrip with trigger.

Part No. 29FT-7 • Price: $29.00

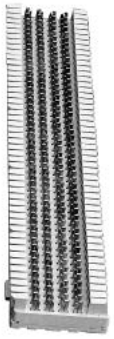
SURFACE JACK

Jack boxes with screw terminals for telephone or network applications.

Part No.	Type	Prices
24TSJ4	RJ11 – 4 conductor	$1.95
24TSJ6	RJ11 – 6 conductor	1.95
24TSJ8K	RJ45 – 8 cond/keyed	2.95

PUNCHDOWN BLOCK

TYPE 66 BLOCK



Part No.	Description	Price
24S66M1-25	50 rows, each row with a single clip having 4 slots for 25 pair size	$20.60
24S66M1-50	50 rows, each row with 2 separate 2 slot clips for 50 pairs size	11.95
24S66M424	24 rows, each row with 2 separate 2 slot clips for 24 pairs size	15.95

BRIDGE CLIPS

10 PCS / BAG

Clips used to connect split row of a split 66 Punchdown Block.

Part No.	1-9	10+
24TBCLIP-10	$1.90	$1.60

LAN TESTER & CRIMP TOOL + PUNCH TOOL + RJ45 PLUGS (100)

This package includes crimping tool, cable/ LAN tester, wire stripper, punch tool, and 100 pcs of RJ45 modular plugs

Part No. 32LNCTPRJ • Price: $19.95

NETWORK CABLES – CAT-5E

- UL lists CSA approved and ETL CAT5E certified
- TSB 568B (AT&T258A) wiring
- High quality 50 gold plated contacts
- Molded type.

LENGTH	BEIGE	BLACK	BLUE	GREEN	GRAY	YELLOW	PRICE
5 ft.		24PC5BK4	24PC5BL4	24PC5GN4	24PC5GR4	24PC5YL4	$1.95
7 ft.	24PC5BE7	24PC5BK7	24PC5BL7	24PC5GN7	24PC5GR7	24PC5YL7	2.50
10 ft.	24PC5BE10	24PC5BK10	24PC5BL10	24PC5GN10	24PC5GR10	24PC5YL10	3.50
15 ft.	24PC5BE15	24PC5BK15	24PC5BL15	24PC5GN15	24PC5GR15	24PC5YL15	4.50
25 ft.	24PC5BE25	24PC5BK25	24PC5BL25	24PC5GN25	24PC5GR25	24PC5YL25	6.25

NETWORK CABLES – CAT-6

- UL lists CSA approved and ETL CAT6 certified
- TSB 568B (AT&T258A) wiring
- High quality 50 gold plated contacts
- Molded Type

LENGTH	BEIGE	BLACK	BLUE	GREEN	GRAY	YELLOW	PRICE
3 ft.	24PC6BE3	24PC6BK3	24PC6BL3	24PC6GN3	24PC6GR3	24PC6YL3	$1.95
7 ft.	24PC6BE7	24PC6BK7	24PC6BL7	24PC6GN7	24PC6GR7	24PC6YL7	3.50
10 ft.	24PC6BE10	24PC6BK10	24PC6BL10	24PC6GN10	24PC6GR10	24PC6YL10	4.50
15 ft.	24PC6BE15	24PC6BK15	24PC6BL15	24PC6GN15	24PC6GR15	24PC6YL15	6.00
25 ft.	24PC6BE25	24PC6BK25	24PC6BL25	24PC6GN25	24PC6GR25	24PC6YL25	8.95

MODULAR FLAT CABLE

Use with modular plugs and standard modular plug crimp tools.

Part No.	Descr.	Type	Price
24TMCF4-100	100 ft.	4-wire	$7.95
24TMCF4-1000	1,000 ft.	4-wire	62.00
24TMCF6-100	100 ft.	6-wire	9.95
24TMCF6-1000	1,000 ft.	6-wire	75.00
24TMCF8-100	100 ft.	8-wire	14.95
24TMCF8-1000	1,000 ft.	8-wire	90.00

REMOTE TELEPHONE & DATA LINE TESTER

For testing *remote* continuity of telephone and data lines using 4, 6 and 8 conductor plugs (RJ_{11} and RJ_{45}). Tests up to 10,000 ft. 1 sec. test time 5 mA max. 9V battery included.

Part No. 34DT02 • Price : $65.00

NETWORK CABLES

CAT 5E AND 6

- 10 Base T
- 4 twisted pairs, 24AWG
- 1,000 ft. spools

Part No.	Description	Price
34NC34	Type 5E, Solid, Green	$98.00
34NC35	Type 5E, Solid Red	98.00
34NC50	Type 5E, Solid, Gray	106.00
34NC51	Type 5E, Solid, Blue	106.00
34NC59	Type 5E, Stranded, Gray	116.00
34NC60	Type 6, Solid, Gray	145.00
34NC61	Type 6, Solid, Blue	150.00
34NC62	Type 6, Stranded, Gray	142.00

RSR TELEPHONE AND DATA LINE TESTER

- Can remotely test cables that terminate with RJ45 or RJ11 connectors.
- Cable length up to 10,000 yards.
- Gold plated connectors.
- LED bars indicate the test status.
- Powered by 9V battery.
- Can be used for testing: Ethernet, 10 Base-T, EIA/TIA-568A, EIA/TIA-568B, AT&T 258A, Token Ring, USOC8/6/4, DEC JMM.

Part No. 01LAN922 • Price: $58.00

PLATINUM TOOLS

COAX CLARIFIER™

The 4Mapper™ Coax Tester is the easy and quick solution to troubleshoot and identify multiple coax cables.

- EZ 1 Button design
- Displays pass, open or short
- Integrated tone generator
- Automatic power off
- Line voltage warning LED
- Ultra bright, high intensity LED's
- 4 custom F remotes, push on design
- Small, compact, fits in the palm of the hand
- Long battery life with flashing low battery LED
- Made is the USA

Part No.34T119C · Price $96.95

PLATINUM TOOLS VDV MAPMASTER 2.0™

The VDV MapMaster combines continuity testing, mapping and tone generator functions into a single unit. Capable of identifying and mapping 19 locations at one time.

- Tests Voice (6 wire), Data (8 wire) and video (coax)
- 7-segment LCD screen
- Tone generator with selectable tone cadence & selectable pins carrying tone
- RJ (Voice & Data) master remote
- Map 19 locations at one time, remotes sold separately
- Tests and indicates pins with shorts, opens reversals, miswires and split pairs
- Displays 'Pass' icon for correctly wired T568A/B 8 & 6 pin and crossover/uplink
- Low power consumption with auto Power-Off
- Made in the USA

Order No	Description	Price
34T104C	Tester with 4 F remotes	$44.95
34T103C	BNC Adapter Kit- 4 BNC (F) to F (F) adapters	12.25

PLATINUM TOOLS

SNAP SHOT™

FAULT FINDING / CABLE LENGTH MEASUREMENT

Advanced Spread Spectrum TDR technology works in all wire environments and is immune to voltage, current, or data stream disruptions.

- Works on energized cables
- Finds cable length or distance
- Measures cable distance on spool
- Accuracy of 1% or better
- Calibrates NVP values
- Internal memory
- Large backlit LCD display
- Built-in tone generator for cable tracing & identification
- Loop test for continuous testing
- Displays length reading in feet or meters
- Auto-off to preserve battery life

Part No. 34TSS200 · Price $245.00

OPEN RACK ASSEMBLY

7' aluminum, 19" rack. Black color.

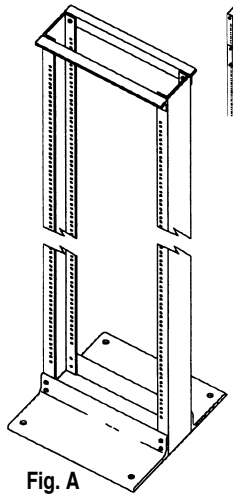


Fig. A

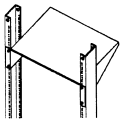


Fig. B

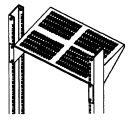


Fig. C

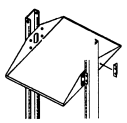


Fig. D

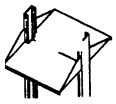


Fig. E

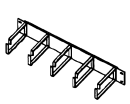


Fig. F

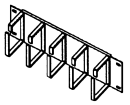


Fig. G

Part No.	Description	Fig.	Price
0611RO	19" Open Rack	A	$275
0611RS1	Cantilever Shelf	B	45
0611RS2	Vented Shelf	C	45
0611RS3	Centerweight Shelf	D	60
0611RS4	200 lb. Shelf	E	85
0611WM1	Wire Mgmt. Panel	F	35
0611WM2	Wire Mgmt. Panel	G	35

PC CABLE TESTER

- Tests most common PC and network cables for open, shorts and pin to pin connections.
- Automatic / variable speed scan mode.
- 36 pin centronics; 9, 15 and 25 pin DSub; 15 pin high density; BNC; RJ45 modular jack; USB
- Operates on external 9V DC adaptor *(optional)*.

Part No.	Description	Price
045PCCT	Tester	$196.00
16D8-1	Adapter 9V	5.95

RIBBON CABLE TESTER

The Ribbon Cable Tester is designed to test most commonly used ribbon cable for continuity, open short and miss-wiring. An intelligent CPU can memorize a standard wire configuration. This enables mass produced cable assemblies to be tested efficiently.

Part No. 045RCT · Price $450.00

FLASHLIGHT LED ECONOMY

Economy Flashlight - economy flashlight is a great general-purpose flashlight to keep on hand. Bright white LED runs up to eight times longer than the incandescent lights in standard flashlights. Lamp life is 40 hours. The LED's wide diameter illuminates a large area with 9 lumens. The ribbed textured along the casing creates a nonslip grip. Easily turn the flashlight on and off with the contour slide switch. Flashlight runs on one D alkaline battery (not included) and has a durable polypropylene casing

Part No.	Description	Price
2800FLD1	LED Flashlight, Economy	$2.95
	OPTIONAL	
2800RGD-PW	Regular "D" Cell Battery	0.55
2800AKD-PW	Alkaline "D" Cell Battery	1.40

EVEREADY

A.) GENERAL PURPOSE

Description	Part No.	1-9	10+
9V Battery	2800RG9	$1.30	$1.20
"D" Cell 1.5V	2800RGD	0.70	0.65
"C" Cell 1.5V	2800RGC	0.55	0.45
"AA" Cell 1.5V	2800RGAA	0.55	0.45
"AAA" Cell 1.5V	2800RGAAA	0.55	0.45
6V Lantern (509)	2800LAN6V	5.90	4.90
6V Lantern (510)	28006SC (Screw)	7.75	7.25

B.) ALKALINE ENERGIZER

Description	Part No.	1-9	10+
9V Battery	2800AK9	$2.50	$2.25
"D" Cell 1.5V	2800AKD	1.50	1.40
"C" Cell 1.5V	2800AKC	1.50	1.40
"AA" Cell 1.5V	2800AKAA	0.90	0.80
"AAA" Cell 1.5V	2800AKAAA	0.90	0.80
"N" Cell 1.5V	2800AKN	1.75	1.50

C.) BUTTON CELL BATTERIES

Description	Part No.	1-9	10+
(i) Calculator, Watch Battery, 1.5V, eq. to #357 or LR44	2800CAL	$1.30	$1.10
(ii) Lithium Battery Coin Cell for memory back-up application Maxell #BR2325	2800BR2325	3.50	2.95

D.) RECHARGEABLE NICKEL CADMIUM

Description	Part No.	1-9	10+
9V	2800NC9	$8.20	$7.85
"D" Cell	2800NCD	5.90	5.50
"C" Cell	2800NCC	5.50	5.35
"AA" Cell	2800NCAA	3.50	2.95

BATTERY CHARGER

UNIVERSAL NI-CAD

Slim line design with LED. Recharges any brand nickel cadmium batteries

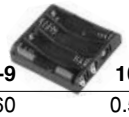
- Special circuitry prevents over-charging
- Charge up to 4 batteries at a time: AAA, AA, C and D batteries in 5 hours; 9V batteries in 14 hours
- 120V/60Hz; 8 watts

Part No. 2800W7675 • Price $20.95

COIN LITHIUM CELL HOLDERS

Description	Part No.	Price
19mm for CR2032	2801BH001	$0.65
For BR2320, 2325, 2330	2801107	1.60
Dual Cell Holder (6V) for "BR2320, 2325, 2330"	28011027	1.95

PLASTIC BATTERY HOLDERS



Description	Part No.	1-9	10+
1"AAA" / with wire leads	2801AAA1PWR	0.60	0.55
1 "AA" / with wire leads	2801AA1PWR	0.55	0.45
1 "AA" / with solder lugs	2801AA1PSL	0.50	0.40
2 "AA" / with snaps	2801AA2PSN	0.70	0.60
2 "AA" / with wire leads	2801AA2PWR	0.70	0.60
4 "AA" / with solder lugs	2801AA4PSL	0.75	0.65
4 "AA" / with snaps	2801AA4PSN	0.80	0.70
4 "AA" / with wire leads	2801AA4PWR	0.80	0.70
1 "C" / with wire leads	2801C1PWR	0.75	0.65
2 "C" / with solder lugs	2801C2PSL	0.80	0.70
4 "C" / with solder lugs	2801C4PSL	0.80	0.70
6 "C" / with solder lugs	2801C6SL	1.40	1.20
6 "C" / with snaps	2801C6SN	1.40	1.20
1 "D" / with solder lugs	2801D1PSL	0.80	0.70
1 "D" / with wire leads	2801D1PWR	0.80	0.70
2 "D" / with solder lugs	2801D2PSL	0.95	0.90
2 "D" / with wire leads	2801D2PWR	0.95	0.90
4 "D" / with solder lugs	2801D4PSL	1.10	1.00
4 "D" / with wire leads	2801D4PWR	1.10	1.00

9V BATTERY SNAPS

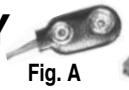


Fig. A

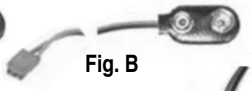


Fig. B

Part No.	Descr.	Fig.	1-9	10-99	100+
2801BSI	I-Type	A	$0.25	$0.20	$0.18
2801BST	T-Type	—	0.25	0.20	0.18
2801BSNAP	I-Type w/ female header	B	0.50	0.45	0.40
2801BSFP1	I-type with 2.1 mm female plug	C	$1.95	1.85	1.50

Fig. C

9V BATTERY HOLDERS

Fig. A Fig. B Fig. C Fig. D Fig. E

Description	Part No.	Fig.	1-9	10+
Plastic Case w/solder lugs	280191P	A	1.05	0.90
Plastic Case, Cradle only	28019PHLD	B	0.45	0.35
Plastic Case w/Cover, leads & switch	2801BHCSGR	C	1.50	1.40
Plastic Case with Leads	28019PWR	C	0.75	0.70
Solder Type, Metal	28011290	D	2.75	2.25
PC Mount, Metal	28011291	E	2.40	2.20

ALUMINUM BATTERY HOLDERS

Fig. A

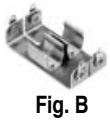


Fig. B

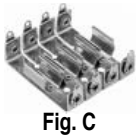


Fig. C

Description	Fig.	Part No.	1-9	10+
Holds 1 "AA"	A	2801AA1M	$1.90	$1.80
Holds 2 "AA"	B	2801AA2M	3.50	3.25
Holds 4 "AA"	C	2801AA4M	4.95	4.50
Holds 1 "C"	A	2801C1M	1.50	1.30
Holds 2 "C"	B	2801C2M	3.50	3.25
Holds 4 "C"	C	2801C4M	4.95	4.75
Holds 1 "D"	A	2801D1M	2.25	2.05
Holds 2 "D"	B	2801D2M	4.30	4.10
Holds 4 "D"	C	2801D4M	4.75	4.50
Holds 1 "9V"	–	28019M	2.90	2.80

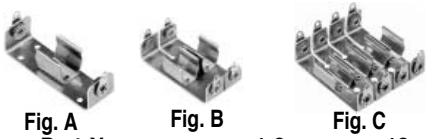
PARALLAX 5 AA BATTERY HOLDER

This battery holder accepts 5 AA cells. It is designed to mount inside our rectangular brushed-aluminum chassis used with the Boe-Bot and BOE Shield-Bot robots.

- 2.1 mm center-positive barrel plug

Part No.	Description	Price
32PX753-00007	5 AA Battery Holder	$2.95

ALUMINUM BATTERY HOLDERS



Description	Fig.	Part No.	1-9	10+
Holds 1 "AA"	A	2801AA1M	$1.90	$1.80
Holds 2 "AA"	B	2801AA2M	3.50	3.25
Holds 4 "AA"	C	2801AA4M	4.95	4.50
Holds 1 "C"	A	2801C1M	1.50	1.30
Holds 2 "C"	B	2801C2M	3.50	3.25
Holds 4 "C"	C	2801C4M	4.95	4.75
Holds 1 "D"	A	2801D1M	2.25	2.05
Holds 2 "D"	B	2801D2M	4.30	4.10
Holds 4 "D"	C	2801D4M	4.75	4.50
Holds 1 "9V"	–	28019M	2.90	2.80

BATTERY CHARGER

UNIVERSAL NI-CAD

Slim line design with LED. Recharges any brand nickel cadmium batteries

- Special circuitry prevents over-charging
- Charge up to 4 batteries at a time: AAA, AA, C and D batteries in 5 hours; 9V batteries in 14 hours
- 120V/60Hz; 8 watts

Part No. 2800W7675 • Price $20.95

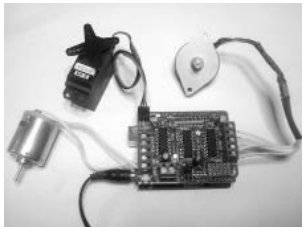
BATTERY TESTER

POCKET SIZE

- Can test AA, AAA, C, D, 9V, Button, hearing aid batteries
- Size: 90 x 60 x 32mm; Wt.: 100gm

Part No. 01SPBT • Price: $5.95

adafruit MOTOR SHIELD FOR ARDUINO KIT



Here is a design for a full-featured motor shield that will be able to power many simple to medium-complexity projects.
• 2 connections for 5V 'hobby' servos connected to the Arduino's high-resolution dedicated timer - no jitter!
• 4 H-Bridges: L293D chipset provides 0.6A per bridge (1.2A peak) with thermal shutdown protection, internal kickback protection diodes. Can run motors on 4.5VDC to 25VDC.
• Up to 4 bi-directional DC motors with individual 8-bit speed selection (so, about 0.5% resolution)
• Up to 2 stepper motors (unipolar or bipolar) with single coil, double coil or interleaved stepping.
• Pull down resistors keep motors disabled during power-up
• **Motors and Arduino are not included.**

Part No. 01ADAMSAK • Price $19.50

HITEC SERVO MOTORS

Ideal for robotic projects. All specs are provided at 4.8/6 volts.

Part No.	Model	Torque kg/cm	Size mm	Wt. gm	Price
29SV10	HS311	3.0/3.7	40x20x37	43	$12.95
29SV11	HS422	3.3/4.1	41x20x37	46	16.50
29SV12	HS55	1.1/1.3	23x12x24	8	18.00
29SV13	HS65HB	1.8/2.2	24x12x24	11	31.50
29SV14	HS645MG	7.7/9.6	41x20x38	55	52.00
29SV16	HS755HB	13.2	59x29x50	110	36.00
29SV17	HS765HB	13.2	59x29x50	110	44.00
29SV18	HS81	3.0	29x12x29	17	24.00
29SV19	HS85BB	3.5	29x13x30	19	32.00
29SV20	HS325HB	3.7	40x20x37	43	16.75
29SV21	HS322HD	3.0/3.7	40x20x36	43	11.50

HS55

HS311

HITEC DIGITAL SERVO MOTORS

Part. No.	Model	Torque	Size In.	Wt. Oz.	Price
29SV60	HS5055MG	21 oz-in	.89x.45x.94	0.33	$22.60
29SV61	HS5056MG	25 oz-in	.88x.45x.94	0.45	35.60
29SV62	HS5065MG	31 oz-in	.92x.45x.94	0.42	39.25
29SV63	HS5084MG	26 oz-in	1.14x.51x1.16	0.75	44.95
29SV64	HS5085MG	60 oz-in	1.14x.51x1.18	0.77	39.25
29SV65	HS5765MH	280 oz-in	2.32x1.14x2.04	6.07	72.25

HS5085MG

SERVO MOTOR MICRO

- Stall Torque: 1.4 kg/cm
- Dimensions: 22.6x11.4x22.2mm
- Operating speed 0.12 sec/60°
- Built -in AM/FM/PM/FSK/
- Includes 3 servo horns

Part No.	Description	Price
29EXIS1123	Micro Servo Motor	$3.95

MOTOR SHIELD FOR ARDUINO

This Motor shield for Arduino uses L293 chip which allow to drive two 7-12V DC motors with maximum 1A current. This shield can be directly mounted onto standard Arduino Duemilanove and Arduino Mega.

SPECIFICATIONS:
• 2 way 7-12V motor drive
• Up to 1A current each way
• PIN 4,5,6,7 are used to drive two DC motors
• Support PWM speed control

Part No. 01DFRDRI00001 • Price $16.50

STEPPER MOTOR (UNIPOLAR)

DC-5V Stepper Motor. Dual Coil center tapped. 120 ohm coil. 7.5 degrees per step. 2¼" dia. Shaft is 0.4" long. 5 wire leads.

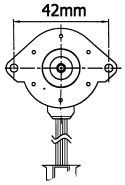
Part No. 29STP5 • Price: $5.95

STEPPER MOTOR (UNIPOLAR)

DC 5V–9V stepper motor. Dual coil center tapped. 100 ohm coil 7.5 / step. 1" diameter shaft is .35" long with .08" diameter. 6 wire leads 12" long.

Part No.	1-9	10+
29STP6	$2.95	2.65

STEPPER MOTOR BIPOLAR



DC 9 to 12V stepper motor. Bipolar, step angle 3.75 , phase resistance 38Ω, current 225mA, can be easily driven with MC3479 IC.

Part No. 29STP9 • Price: $4.50

SERVO MOTORS

Ideal for robotic projects. All specs are at 4.8 / 6 volts

Part No	Description	Size	Torque	Wt. Gms.	Price
29SV40	Standard	40x20x36	3.2	36g	$8.50
29SV41	Standard	28x13x37	2.5	17g	6.95
29EXIS1123	Standard Micro	22x12x29	1.6	9gm	4.75
29SV50	Continuous Rotation	41x20x37	3.5	38g	8.95
29SVACCKIT	For servo motors. Accessory kit with 4 different types of connecting wheel				1.75

GEARMOTOR 12V WITH ENCODER

- Powerful 12 V brushed DC motor with a 50:1 metal gearbox
- Integrated quarature encoder with a 64 counts per revolution
- Size 2.6" x 1.5" with 0.6" long 6mm D-shaped shaft
- Speed 200 RPM, stall torque 200 oz-in, stall current 5A all at 12V

Part No. 29GB37Y3530-50 • Price $38.95

MOTOR DC – 9V – HEAVY DUTY

Motor Body: 1.1" Dia. 1.5" Length
Shaft 0.09" Dia. 0.47" Length

Electrical specs: 4,000 rpm @ 9V. Current draw 70mA @ 9V. Metal cover. Heavy duty. Operates from 5V to 14V

Part No.	Description	1-9	10+
29DCM4	With solder tab	$1.70	$1.60
29DCM28	With wire leads	$2.35	$2.20

MOTOR DC – 3V

Motor Body: Length: 1" Width: 0.8" Height: 0.6"
Shaft Diameter: 0.08" Length: 0.3

Electrical characteristics: 11000 rpm@ 3V. Current draw 200mA @ 3V.

Part No.	Description	1-9	10+
29DCM2	With solder tab	$0.65	$0.60
29DCM22	With wire leads	$0.75	$0.70

MOTOR DC - 6V

Motor Body: Length: 1" Width: 0.8" Height: 0.6"
Shaft Diameter: 0.08" Length: 0.3

Electrical characteristics: 9000 rpm @ 6V. Current draw 60mA @ 6V

Part No.	Description	1-9	10+
29DCM1	With solder tab	$0.65	$0.60
29DCM21	With wire leads	$0.75	$0.70

MOTOR DC - 9V

Motor Body: Length: 1" Width: 0.8" Height: 0.6"
Shaft Diameter: 0.08" Length: 0.3

Electrical characteristics: 8500 rpm @ 9V. Current draw 40mA @ 9V

Part No.	1-9	10+
29DCM5	$0.65	$0.60

STEPPER MOTOR DRIVER

This unit is a chopper type full or half-step driver for use with 4, 6 and 8 wire stepper motors.

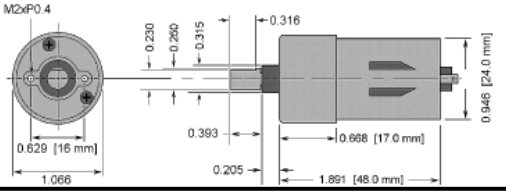
- Driver for 2 or 4 phase stepper motors
- Full/half step bipolar chopper drive
- Power supply voltage can range from 18 ~ 40VDC and does not have to be regulated
- Motor phase current adjustable up to 2 Amp
- Step rate less than or equal to 12 kHz
- Opto-isolated step clock input, direction inputs (CW/CCW), and Enable/Disable inputs that can be directly driven by either TTL gates, or by open collector transistor outputs
- Protected by a sturdy, heat conductive aluminum case, it is suitable for harsh environments
- 118mm (L) x 70mm (W) x 28mm (H)

Part No.	Price
29SMD220	$72.00

GEAR HEAD MOTOR – 12VDC – PERFECT FOR ROBOTIC APPLICATIONS

Reduction Ratio: 76.8 to 1
Motor Speed: 4500 RPM @ 12 VDC
Shaft Speed: 58 RPM @ 12 VDC
Motor Current: ≤ 60mA @ No-Load
Torque: 0.43 kg - cm = 6 oz - in.

Part No.	1-9	10+
29GHM	$10.95	$9.75



BANANA TO BANANA LEAD SET

HIGH IMPACT STACKABLE TYPE

Wire Length 36"

Part No.	Color	1-9	10+
05ALS19	Red	$2.20	$1.95
05ALS12	Black	2.20	1.95
05ALS13	Yellow	2.20	1.95
05ALS14	Green	2.20	1.95
05ALS16	White	2.20	1.95
05ALS17	Blue	2.20	1.95

BNC CABLES

BNC MALE TO BNC MALE

Part No.	Length	Impedance	1-9	10+
05BNC603	3'	75 ohm	$3.50	$2.95
05BNC606	6'	75 ohm	3.95	3.50
05BNC612	12'	75 ohm	4.95	4.75
05BNC625	25'	75 ohm	7.60	6.85
05BNC60350	3'	50 ohm	4.25	3.50
05BNC60650	6'	50 ohm	4.50	3.95
05BNC61050	10'	50 ohm	4.00	3.00
05BNC61250	12'	50 ohm	6.00	5.00
05BNC62550	25'	50 ohm	10.50	9.95

VIDEO CABLES

F-59 TO F-59

- Deluxe "Gold Ends"
- Standard 75 ohm
- With Strain Relief

Part No.	Description	Length	1-9	10+
05F603	RG59 Cable	3'	$2.20	$1.75
05F606	RG59 Cable	6'	2.50	2.25
05F612	RG59 Cable	12'	3.25	2.95
05FFPB63	RG6 Cable	3'	1.95	1.65
05FFPB66	RG6 Cable	6'	2.25	2.10
05FFPB612	RG 6 Cable	12'	3.95	3.70

RCA TO RCA

- Deluxe "Gold Ends"
- Standard 75 ohm
- With Strain Relief

Part No.	Length	1-9	10+
05RCA603	3'	$2.40	$2.20
05RCA606	6'	3.50	2.95
05RCA612	12'	3.75	3.50

RSR BANANA TO ALLIGATOR LEAD SET

(1 EA. OF RED & BLACK)

18-gauge test lead wire, red & black, 36" long

Part No.	1-9	10+
05ALS3	$2.75	$2.50

RSR BANANA TO BANANA LEAD SET

(1 EA. OF RED & BLACK)

18-gauge test lead wire, red & black.

Part No.	Descr.	1-9	10+
05ALS4	36"	$2.95	$2.75
05ALS9	24"	2.75	2.50
05ALS15	60"	4.75	4.25
05ALS32*	36"	4.95	4.75

(*deluxe version)

RSR BANANA TO MINI GTRABBER LEAD SET

(1 EA. OF RED & BLACK)

20-gauge test lead wire, red & black, 36" long

Part No.	1-9	10+
05ALS5	$3.50	$2.95
05ALS30*	5.50	4.95

(*deluxe version)

RSR BANANA TO ALLIGATOR LEAD SET

(1 EA. OF RED & BLACK)

18-gauge test lead wire, red & black, 36" long

Part No.	Descr.	1-9	10+
05ALS8	Coax Cable	$3.45	$2.95

RSR SCOPE PROBE

SWITCHABLE

60MHZ

- **Insulated BNC** Connector
- BW → DC to 60MHz
- x1, x10 Selectable Switch
- Compensation Range → 15 to 50 pF

Includes 1 each probe, spring hook and ground lead.

Part No.	1-9	10-99	100+
05SPAK110	$13.95	$11.95	$8.95

RSR SCOPE PROBE –

SWITCHABLE

100 MHZ / 250 MHZ

B.W. DC to 100/250 MHz. BNC to IC Test Hook, with selectable X1, X10 switch. Includes 1 ea. probe, spring hook, ground lead, insulating tip, measuring tip, IC tip, adjusting tool, channel identifier clip, BNC adaptor.

Part No.	Description	1-9	10-99	100+
05SPAK510	100 MHz	$17.95	$15.95	$13.95
05SPGL250	250 MHz	21.95	19.95	17.95

RSR TEST PIN LEADS

- Ideal for Breadboarding
- 20 gauge test lead wire

Part No.	Description	Fig	1-9	10+
05ALS22	100 MHz	A	$3.75	$3.25
05ALS23	250 MHz	B	1.50	1.20
05ALS24	MiniGrabber to Test Pin	C	2.50	2.25

HDMI CABLES

HDMI delivers high definition digital pictures from DVD, set-top boxes to your HDTV or projector or other displays. Gold plated connector cable

Part No.	Description	Price
045HDMI01	HDMI Male to HDMI Male, 3 ft.	$7.95
045HDMI03	HDMI Male to HDMI Male, 10 ft.	14.95

RSR BNC TEST LEADS

ECONOMY

36" long, coax cable, BNC to Alligator or BNC to IC Test Hook.

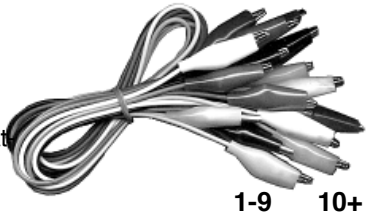
Fig. A

Fig. B

Part No.	Fig.	Description	1-9	10+
05SPAT1	A	BNC to IC Test Hook 36" long coax & 8" long connecting wires	$3.75	$3.25
05SPAT4	A	BNC to IC Test Hook 60" long coax & 18" long connecting wires	4.50	4.25
05SPAT2	B	BNC to Alligators - 36" long coax & 8" long connecting wires	3.25	2.95
05SPAT5	B	BNC to Alligator - 60" long coax & 8" long connecting (Red & Blk.) wires	4.25	3.95

ALLIGATOR LEAD SETS

Standard duty, 20" long, color-coded leads with insulated alligator clips at each end. Alligator clips are crimped and **soldered** to the leads for greater reliability.



Part No.	Description	1-9	10+
05ALS1A	Set of 2 Leads (red & black)	$1.10	$0.95
05ALS1	Set of 10 Leads	3.65	3.25
05ALS2	Set of 10 Leads,Heavy Duty	3.95	3.50

MINI GRABBER LEAD SET

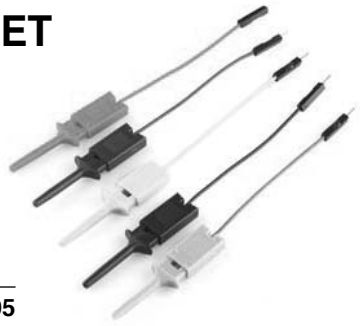
5 COLOR SET INCLUDES ONE EACH OF RED, BLACK, YELLOW, GREEN AND WHITE

5 color coded, 16" test leads with mini grabber hook-on probes at both ends. Set includes one each red, black, yellow, green, white.

Part No.	1-9	10+
05ALS7	$6.95	$6.25

IC HOOK / PIN SET

- IC Hook to male pin. Wire length 2.5"
- Bag of 5 IC Hooks of different colors (red, black, green, white and blue)



Part No. 05ICSET • Price $4.95

MAGNETS

Part No.	Description	1-9	10+
99MAG1877	High Energy – 2" x 7/8" x 3/8"	$1.50	$1.25
99MAG1875	Rectangular – 1" x 3/4" x 1/8"	0.65	0.55
99MAG1885	Round – 1.2" dia.	0.45	0.35
99MAG1880	Button – 1/2" dia.	0.45	0.35
99MAGTAP	Magnetic tape – 1/2" X 30"	1.35	1.20

MINI COMPASS

Tiny but accurate 7/10" dia. and 1/4" thick. Floating needle.

Part No.	1-9	10+
0604D1306	$0.95	$0.85

velleman

ELECTRONIC / DIGITAL COMPASS

- Valuable navigational/aid/safety device for travellers
- Perpetual calendar
- Alarm + clock
- Clock displayed in 12/24h mode
- Heading displayed in cardinal points (N, NW, etc.) and in numerals (degrees)
- Directional compass arrow
- Backlit LCD for use at night
- Manual calibration
- Extra wide temperature range: 0 C ~ +60 C (32 F ~ 140 F)

SPECIFICATIONS

- Power supply: 2 x 1.5V AAA batteries *(not incl.)*

Part No. 01VCOMP1 • Price $34.75

CABLE CLAMP PLASTIC

Locking

PACKED 10 PCS. PER PACK

Part No.	Cable Diameters	Price/Pak 1-9	10+
233100	1/4" – Regular	$0.95	$0.80
233101	3/8" – Regular	1.45	1.35
233102	1/2" – Regular	1.05	0.95
233103	3/4" – Regular	1.30	1.05
233104	1" – Regular	1.60	1.45
233105	3/8" – Locking adhesive backed	9.50	8.50
233106	5/8" – Locking adhesive backed	14.90	13.90
233107	7/8" – Locking adhesive backed	15.90	14.50

MINI CIRCUIT BREAKER

Mini series "Push to Reset" single pole circuit breaker. Based on a proven "snap-acting" bi-metallic thermal sensing element system. The resettable mechanism then remains disengaged until manually reset.

Part No.	Rating	1-9	10+
29MCB5	5A	1.95	1.75
29MCB7	7A	1.95	1.75
29MCB10	10A	1.95	1.75

RESETTABLE / PTC FUSES

- General-purpose resettable fuses suited for power supplies, alarm systems, speakers, motors etc.
- Max volt - 60V
- Max current - 40A

Part No.	Current Hold	(A) Trip	R Min. (Ohms)	Price 1-9	10+
2000 RXE 010	0.10	0.20	2.50	0.45	0.40
2000 RXE 020	0.20	0.40	1.83	0.45	0.40
2000 RXE 030	0.30	0.60	0.88	0.50	0.45
2000 RXE 050	0.50	1.0	0.50	0.50	0.45
2000 RXE 075	0.75	1.5	0.25	0.50	0.45
2000 RXE 110	1.10	2.20	0.15	0.50	0.45
2000 RXE 160	1.60	3.20	0.09	0.55	0.50
2000 RXE 250	2.50	5.00	0.05	0.65	0.60
2000 RXE 300	3.0	6.00	0.04	0.70	0.65

CIRCUIT BREAKERS

Miniature overcurrent circuit breakers, single pole, thermal.

- High precision — low cost
- Max voltage ratings 250V AC, 28V DC
- Dielectric strength 1500V AC
- Snaps in panels up to 0.062" thick
- For termination — use .25" quick connects; Soldering to Terminals Is Not Recommended

Part No.	Description	1-9	10+
29CB.25	0.25 A	$7.95	$7.50
29CB.5	0.5 A	6.50	6.25
29CB 1	1 A	6.50	6.25
29CB 2	2 A	7.25	6.95
29CB 3	3 A	5.50	4.95
29CB 5	5 A	4.50	3.95
29CB 10	10 A	5.50	4.95
29CB 12	12 A	4.50	3.95

IDEAL. **SAFE-T-GRIP® POCKET FUSE PULLER**

- Fully insulated; no-slip grip; moisture resistant.
- No more danger of shock or burns, or bending fuse clips through improper removal.
- A fully insulated fuse puller molded of reinforced high-dielectric engineered plastic.
- Designed with notched handles for a no-slip safe grip.
- Permanently marked with recommended range of sizes.
- 7 1/2" long.
- Made in USA

Part No. 0604FP127-524 • Price: $16.95

FUSES AND HOLDERS

STANDARD FAST ACTING-
BUSSMAN 1/4" X 11/4", 250V OR LESS, UL LISTED

Part No.	AMP	1-9	10+
2000 AGC 1/16	1/16	$0.95	$0.85
2000 AGC 1/10	1/10	0.95	0.85
2000 AGC 1/8	1/8	0.95	0.85
2000 AGC 1/4	1/4	0.60	0.50
2000 AGC 1/2	1/2	0.30	0.25
2000 AGC 1	1	0.25	0.20
2000 AGC 2	2	0.25	0.20
2000 AGC 3	3	0.25	0.20
2000 AGC 4	4	0.25	0.20
2000 AGC 5	5	0.25	0.20

SLOW BLOW FUSES *BUSSMAN*
1/4" X 1 1/4", UL LISTED

Part No.	AMP	1-9	10+
2000 MDL 1/10	1/10A	$1.10	$1.05
2000 MDL 1/4	1/4A	0.90	0.80
2000 MDL 1/2	1/2A	0.70	0.65
2000 MDL 1	1A	0.60	0.55
2000 MDL 2	2A	0.60	0.55
2000 MDL 3	3A	0.60	0.55
2000 MDL 4	4A	0.60	0.55
2000 MDL 5	5A	0.60	0.55
2000 MDL 6	6A	0.60	0.55

INSTRUMENT FUSES
1/4" X 1", FAST ACTING, UL LISTED

Part No.	AMP	1-9	10+
2000 AGX 1/4	1/4A	0.50	0.45
2000 AGX 1/2	1/2A	0.65	0.55
2000 AGX 1	1A	0.35	0.30
2000 AGX 2	2A	0.35	0.30
2000 AGX 3	3A	0.35	0.30

STANDARD FAST ACTING – ECONOMY TYPE 1/4" X 1 1/4", 250V OR LESS

Part No.	AMP	1-99	100+
2000 AYT 1/4	1/4A	$0.18	$0.12
2000 AYT 1/2	1/2A	0.18	0.12
2000 AYT 3/4	3/4A	0.18	0.12
2000 AYT 1	1A	0.18	0.12
2000 AYT 2	2A	0.18	0.12
2000 AYT 3	3A	0.18	0.12
2000 AYT 4	4A	0.18	0.12
2000 AYT 5	5A	0.18	0.12

FUSE ASSORTMENT KIT

This kit contains popular fuses used in electronic repair. Kit contains 10 each of the following values:

Total of 160 pcs.

- **AGC Type (1/4" x 1 1/4") –** 1/2A; 1A; 2A; 3A; 4A; 5A
- **GMA Type (5mm x 20mm)** – 1/2A; 1A; 2A; 3A; 4A
- **MDL Type (1/4" x 1 1/4")** – 1/2A; 1A; 2A; 3A; 4A; Slow-Blow

Part No. 20AFK • Price $25.95

SLOW BLOW FUSES
ECONOMY TYPE, 1/4" X 1 1/4"

Part No.	AMP	1-99	100+
2000 MYT 1/8	1/8A	$0.60	$0.50
2000 MYT 1/2	1/2A	0.50	0.45
2000 MYT 3/4	3/4A	0.50	0.45
2000 MYT 1	1A	0.40	0.35
2000 MYT 2	2A	0.40	0.35
2000 MYT 3	3A	0.40	0.35
2000 MYT 4	4A	0.40	0.35
2000 MYT 5	5A	0.40	0.35

PIGTAIL FUSES – FAST ACTING
ECONOMY TYPE, 1/4" X 1 1/4"

Part No.	AMP	1-99	100+
2000 PG 1/4	1/4A	$0.70	$0.50
2000 PG 1/2	1/2A	0.70	0.50
2000 PG 1	1A	0.70	0.50
2000 PG 2	2A	0.70	0.50
2000 PG 3	3A	0.70	0.50
2000 PG 4	4A	0.70	0.50

GMA SERIES – FAST ACTING
ECONOMY TYPE, 5mm X 20mm

Part No.	AMP	1-99	100+
2000 GYT 1/4	1/4A	0.22	0.18
2000 GYT 1/2	1/2A	0.22	0.18
2000 GYT 1	1A	0.22	0.18
2000 GYT 2	2A	0.22	0.18
2000 GYT 3	3A	0.22	0.18
2000 GYT 4	4A	0.22	0.18
2000 GYT 5	5A	0.22	0.18

FUSE HOLDERS

Fig. A

Fig. C

Fig. B

Fig. D

Part No.	Description	Fig.	1-9	10+
2001LINL	In-Line Holder (For 1 1/4 x 1/4 Fuses)	A	$0.55	$0.50
2001LINS	In-Line Holder (For 5x20mm Fuses)	A	0.65	0.55
2001PMS	Panel Mount Round, Screw-In	B	0.75	0.70
2001PCB	Fuse Block	C	0.90	0.80
2001PCC	Fuse Clip	D	0.25	0.20

NUTS AND WASHERS–HEX NUTS

PACKAGED 100 PER BOX

Steel plated.

Part No.	Size	1-9	10+
2321050	2:56	$2.20	$1.90
2321051	4:40	1.75	1.50
2321052	6:32	1.95	1.75
2321053	8:32	1.95	1.75

WASHERS

PACKAGED 100 PER BOX

Steel Zinc plated.

Fig. A – Lock Washer Split

Fig. B – Lock Washer – Internal Tooth

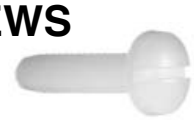
Fig. C – Flat Washer

Part No.	Size	Fig.	Price
2321060	#4	A	$2.50
2321061	#6	A	2.50
2321062	#8	A	2.50
2321063	#4	B	3.00
2321064	#6	B	3.90
2321065	#8	B	3.00
2321066	#4	C	3.00
2321067	#6	C	3.00
2321068	#8	C	3.00

NYLON MACHINE SCREWS

PACKAGED 10 PER BAG

High Quality. Type 66 Nylon.



Part No.	Size	1-9	10+
2321080	4:40 x 1/4"	$2.25	$1.95
2321081	4:40 x 1/2"	1.70	1.60
2321082	6:32 x 1/4"	1.50	1.20
2321083	6:32 x 1/2"	1.50	1.20
2321084	6:32 x 1"	1.50	1.20
2321085	8:32 x 1/2"	1.50	1.20
2321086	8:32 x 1"	1.50	1.20

NYLON NUT AND WASHER

PACKAGED 10 PER BAG

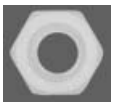


Fig. A – Hex Nut

Fig. B – Flat Washer

Part No.	Size	Fig.	1-9	10+
2321090	4:40	A	$1.60	$1.40
2321091	6:32	A	1.95	1.75
2321092	8:32	A	1.10	0.90
2321093	4:40	B	0.65	0.50
2321094	6:32	B	0.65	0.50
2321095	8:32	B	0.65	0.50

QUARTS CLOCK MECHANISM

- Spare hands: WCM1/SPI
- Power supply: 1.5V AA battery (not incl.)
- Dimensions: 2.2" x 2.2" x0.6"

Part No. 29QCL • Price: $6.95

MACHINE SCREWS

PACKAGED 100 PER BOX

Round Head. Steel, Zinc-plated.

Part No.	Size	1-9	10+
2321000	2:56 x 1/4"	$3.25	$2.95
2321001	2:56 x 3/8"	4.95	4.75
2321002	2:56 x 1/2"	3.25	2.95
2321012	4:40 x 1/4"	3.50	2.50
2321003	4:40 x 3/8"	3.50	2.50
2321004	4:40 x 1/2"	2.50	1.50
2321005	4:40 x 1"	3.95	3.75
2321014	6:32 x 1/4"	3.50	3.25
2321006	6:32 x 3/8"	3.50	3.25
2321007	6:32 x 1/2"	3.50	3.25
2321008	6:32 x 1"	4.95	4.75
2321009	8:32 x 3/8"	3.50	3.25
2321010	8:32 x 1/2"	2.90	2.70
2321011	8:32 x 1"	4.95	4.50

SHEET METAL SCREWS

PACKAGED 100 PER BOX

Pan Head. Steel, Zinc-plated.

Part No.	Size	1-9	10+
2321030	#4 x 1/4"	$2.50	$2.25
2321031	#4 x 3/8"	2.50	2.25
2321032	#4 x 1/2"	2.75	2.50
2321033	#6 x 3/8"	2.75	2.50
2321034	#6 x 1/2"	2.75	2.50
2321035	#6 x 3/4"	3.75	3.50
2321036	#6 x 1"	3.25	2.95
2321037	#8 x 3/8"	2.95	2.75
2321038	#8 x 1/2"	2.95	2.75
2321039	#8 x 3/4"	3.50	3.25

NYLON HARDWARE ASSORTMENT KIT

Part No.	Description	1-9	10+
2321NHK	40 Screws in 3 Sizes; 30 Hex Nuts, 30 Washers	$18.75	$17.50

3M BUMPON™ BUMPERS

ADHESIVE FEET

10 PER PACK

- Made of slip resistant polyuethane
- Color black
- Pressure sensitive adhesive allows fast and easy application

Part No.	Shape	Size	Price/Pak 1-9	10+
2330RB1	Tapered square	.40" x 10"	$1.10	$0.80
2330RB2	Tapered square	.50" x .12"	1.10	0.80
2330RB3	Tapered square	.81" x .30"	1.90	1.60
2330RB4	Cylindrical	.50" x .14"	1.10	0.80
2330RB5	Hemisphere	.44" x .20"	1.10	0.80

RUBBER BUMPERS

PACKAGED 4 PER BAG

Self Stick

Screw Type Molded Washers

Part No.	Description	Prices/Pak 1-9	10+
2330RBG	Tapered Sq.- .23 x .50	$0.40	$0.30
2330721	For #4 screw	1.95	1.85
2330728	For #6 screw	2.70	2.60
2330729	For #8 screw	2.30	2.10

ALUMINUM SPACERS

PRECISION FORMED — NO BURRS

PACKAGED 10 PER BAG

Made of flat strip aluminum and rolled on precision equipment.

Part No.	Length	Screw Size	Prices/Pak 1-9	10+
2311398	1/4"	4	$0.90	$0.80
2311402	1/2"	4	1.25	1.10
2311420	1"	4	1.00	0.90
2311405	1/4"	6	1.00	0.90
2311409	1/2"	6	1.10	1.00
2311427	1"	6	1.10	1.05
2311429	1 1/2"	6	1.25	1.15
2311412	1/4"	8	1.10	1.05
2311416	1/2"	8	1.30	1.20
2311434	1"	8	1.10	1.05
2311436	1 1/2"	8	1.70	1.60

THREADED SPACERS

Hex Threaded Spacers. Aluminum iridite finish.

Part No.	Length	Thread Size	Hex 1-9	10+
23112201	1/4"	4-40 x .25" OD	$0.25	$0.20
23112203	1/2"	4-40 x .25" OD	0.35	0.30
23112205	1"	4-40 x .25" OD	0.65	0.60
23112208	1/4"	6-32 x .25" OD	0.35	0.30
23112210	1/2"	6-32 x .25" OD	0.40	0.35
23112212	1"	6-32 x .25" OD	0.50	0.45
23112214	2"	6-32 x .25" OD	1.10	0.95
23112217	1/2"	8-32 x .25" OD	0.40	0.30
23112219	1"	8-32 x .25" OD	0.75	0.65
23112221	2"	8-32 x .25" OD	1.25	1.15

For other sizes, please contact customer service.

HEX MALE/FEMALE THREADED SPACERS

BRASS NICKEL PLATED

Part No.	Length	Thread Size	1-9	10+
23111944	1/2"	4-40	$0.85	$0.80
23111947	1"	4-40	0.80	0.68
23111952	1/2"	6-32	0.85	0.80
23111644	1"	6-32	0.80	0.68
23111646	2"	6-32	1.55	1.45

SOLDER LUGS — PLAIN / LOCKWASHER

PACKAGED 10 PCS/PAK

Part No.	Fig.	Size.	Prices/Pak 1-9	10+
23107328	A	4	$0.95	$0.90
23107329	A	6	0.95	0.90
23107330	A	8	0.95	0.90
2310908	B	4	0.95	0.90
2310914	B	6	0.95	0.90
2310915	B	8	0.95	0.90

Plain

A

Lock

B

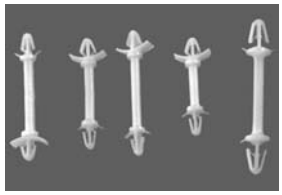
NYLON SPACERS

Economical for terminal or printed circuit board supports. 1/4" OD.

Part No.	Length	Screw Size	1-9	10+
2311876	1/4"	#4	$0.30	$0.25
2311878	1/2"	#4	0.35	0.30
2311882	1"	#4	0.40	0.30
2311886	1/2"	#6	0.40	0.30
2311890	1"	#6	0.40	0.30

NYLON SPACER SUPPORTS

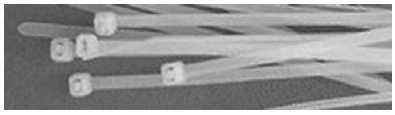
Locking type Easy to install. Low cost. Releaseable.



Part No.	A Dim.	1-9	10+
23111927B	1/4"	$0.25	$0.20
23111929B	1/2"	0.30	0.25
23111931B	3/4"	0.35	0.30
23111933B	1"	0.55	0.50

CABLE TIES

PACKAGED 100 PCS. PER BAG



Natural Color, Nylon.

Part No.	Size	1-9	10+
233014	4"	$2.90	$2.70
233016	6"	4.20	3.95
233018	8"	5.50	5.20
233021	4"	2.95	2.75

(25 pcs. ea. of 4 diff. colors)

CABLE TIES KIT

Kit containing total of 100 cable ties. 20 each of the following sizes: 3"x0.10", 4 3/4"x0.13", 6"x0.14", 8"x0.1", 10"x0.19"

Part No.	1-9	10+
23CTKIT	$4.95	$4.25

KNOBS

Fig. A

Fig. B

Fig. C

Fig. D

Part No.	Description	Fig.	1-9	10+
23302044-18	For knurled shaft	A	$0.55	$0.50
23302044-18S	Small for knurled shaft	A	0.50	0.45
2330PN9E	With set screw, 1/4" shaft	B	0.85	0.75
2330RN99F	With set screw, 1/4" shaft	C	0.75	0.65
2330POINTE	With set screw, 1/4" shaft	D	0.85	0.80

ENAMEL MAGNET WIRE

1/4 LB. OR 1 LB. SPOOLS

Copper wire with enamel insulation used for making custom coils, transformers.

Part No.	Gauge	Approx. Length	Spool Size	Prices
2701MG32	32	1,950'	1/4 lb.	$6.75
2701MG30	30	775'	1/4 lb.	4.75
2701MG28	28	500'	1/4 lb.	4.95
2701MG26	26	300'	1/4 lb.	4.95
2701MG24	24	200'	1/4 lb.	4.75
2701MG22	22	125'	1/4 lb.	4.25
2701MG20	20	75'	1/4 lb.	4.75
2701MG18	18	50'	1/4 lb.	4.75
2700MG30	30	3,100'	1 lb.	16.95
2700MG28	28	2,000'	1 lb.	16.95
2700MG26	26	1,200'	1 lb.	16.95
2700MG24	24	800'	1 lb.	16.50
2700MG22	22	500'	1 lb.	14.50
2700MG20	20	300'	1 lb.	14.75
2700MG18	18	200'	1 lb.	13.95
2700MG32	32	7,800'	1 lb.	19.50

SPEAKER WIRE

2 CONDUCTOR

Part No.	Gauge	Length	Prices
27001SW18	18	100'	28.00
27003SW18	18	1,000'	195.00
27001SW16	16	100'	30.00
27003SW16	16	1,000'	245.00

GRAY FLAT RIBBON CABLE

- Ideal for IDC connectors
- Spacing 0.05"; 28AWG (7x36)
- Stranded copper wire

Part No.	No. of Conductors	Length	Price
27000G16	16	10'	3.25
27001G16	16	100'	25.00
27000G25	25	10'	4.50
27001G25	25	100'	35.00
27000G40	40	10'	8.00
27001G40	40	100'	59.00

MULTI-COLOR RAINBOW

RIBBON CABLE

STANDARD 10 COLOR REPEAT SEQUENCE

Part No.	No. of Conductors	Length	Price
27000R16	16	10'	6.00
27001R16	16	100'	65.00
27000R24	24	10'	7.50
27001R24	24	100'	66.00
27000R25	25	10'	7.75
27001R25	25	100'	70.00
27000R40	40	10'	12.00
27001R40	40	100'	120.00
27000R50	50	10'	20.00
27001R50	50	100'	125.00

HOOK-UP WIRE KIT

- Six wire spools, 25 ft. or 100 ft.
- Assorted colors: Red, black, green, yellow, blue, white
- 6 spools contained in a cardboard dispensing box, which keeps hook-up wire neat and clean

Part No.	Description	Price
27WK22SLD25	22 Ga, Solid, 25ft Spools	$11.95
27WK22SLD100	22 Ga, Solid, 100ft. Spools	38.50
27WK22STR25	22 Ga, Stranded, 25ft. Spools	14.50
27WK22STR100	22 Ga, Stranded, 100ft. Spools	38.50
27WK24SLD25	24 Ga, Solid, 25ft. Spools	14.50
27WK24SLD100	24 Ga, Solid, 100ft. Spools	32.95
27WK24STR25	24 Ga, Stranded 25ft. Spools	14.95
27WK24STR100	24 Ga, Stranded 100ft. Spools	31.95
27WK26SLD25	26 Ga, Solid 25ft Spools	14.50
27WK26SLD100	26 Ga, Solid 100ft Spools	32.95
27WK26STR25	26 Ga, Stranded 25ft Spools	14.50
27Wk26STR100	26 Ga, Stranded 100ft. Spools	33.95
27WK20SLD25	20 Ga, Solid, 25ft. Spools	18.50
27WK20SLD100	20 Ga, Solid, 100ft. Spools	48.95
27WK20STR25	20 Ga, Stranded, 25ft. Spools	18.50
27WK20STR100	20 Ga, Stranded, 100ft. Spools	48.95
27WK18SLD25	18 Ga, Solid, 25ft. Spools	23.95
27WK18STR25	18 Ga, Stranded 25ft. Spools	23.95

TEST LEAD WIRE

18/20 GAUGE – RUBBER INSULATED ECONOMY

Part No.	Description	Price
27031TLR5	18 AWG; Red; 100 Ft.	$19.95
27031TLB5	18 AWG; Black; 100 Ft.	19.95
27031TLR1	20 AWG; Red,; 100 Ft.	17.95
27031TLB1	20 AWG; Black; 100 Ft.	17.95
27031TLYL1	20 AWG: Yellow; 100 Ft.	17.95
27031TLGN1	20 AWG; Green; 100 Ft.	17.95
27031TLBLU1	20 AWG; Blue; 100 Ft.	17.95

18 GAUGE – RUBBER INSULATED BELDON

Part No.	Color	Length	Price
270318899R	Red	100'	$36.95
270318899B	Black	100'	36.95
270318899G	Green	100'	95.00
270338899R	Red	1,000'	195.00
270338899B	Black	1,000'	195.00

24 GAUGE – RUBBER INSULATED BELDON

Part No.	Color	Length	Price
270318890R	Red	100'	$59.00
270318890B	Black	100'	59.00

THERMO COUPLE WIRE

10' LENGTHS

Part No.	Type	Prices
2705THCN	Constantan	$7.00
2705THIR	Iron	5.00

20 GAUGE SOLID

Part No.	Color	Spool Length	1-9	10+
2700120WH	White	100'	$8.95	$8.50
2700120BR	Brown	100'	8.95	8.50
2700220WH	White	500'	39.00	37.00
2700220BR	Brown	500'	39.00	37.00

HOOK UP WIRE 22 GAUGE SOLID

Part No.	Color	Spool Length	1-9	10+
270022BK	Black	25'	$1.45	$1.30
270022RD	Red	25'	1.45	1.30
270022WH	White	25'	1.45	1.30
270022YL	Yellow	25'	1.45	1.30
270022GR	Gray	25'	1.45	1.30
270022BR	Brown	25'	1.45	1.30
270022GN	Green	25'	1.45	1.30
270022OR	Orange	25'	1.45	1.30
270022BL	Blue	25'	1.45	1.30
270022PR	Purple	25'	1.45	1.30
2700122BK	Black	100'	5.50	5.25
2700122RD	Red	100'	5.50	5.25
2700122WH	White	100'	5.50	5.25
2700122BL	Blue	100'	5.50	5.25
2700122YL	Yellow	100'	5.50	5.25
2700122GN	Green	100'	5.50	5.25
2700122BR	Brown	100'	5.50	5.25
2700122GR	Gray	100'	5.50	5.25
2700122OR	Orange	100'	5.50	5.25
2700122PR	Purple	100'	5.50	5.25
2700322BK	Black	1,000'	39.90	37.90
2700322RD	Red	1,000'	39.90	37.90
2700322WH	White	1,000'	39.90	37.90
2700322YL	Yellow	1,000'	39.90	37.90
2700322BR	Brown	1,000'	39.90	37.90
2700322OR	Orange	1,000'	39.90	37.90
2700322GN	Green	1,000'	39.90	37.90
2700322BL	Blue	1,000'	39.90	37.90
2700322PR	Purple	1,000'	39.90	37.90
2700322GR	Gray	1,000'	39.90	37.90

24 GAUGE SOLID

Part No.	Color	Spool Length	1-9	10+
270024BK	Black	25'	$1.25	$1.10
270024RD	Red	25'	1.25	1.10
270024WH	White	25'	1.25	1.10
270024YL	Yellow	25'	1.25	1.10
2700124BK	Black	100'	5.40	5.15
2700124RD	Red	100'	5.40	5.15
2700124WH	White	100'	5.40	5.15
2700124BL	Blue	100'	5.40	5.15
2700124YL	Yellow	100'	5.40	5.15
2700324BK	Black	1,000'	37.00	35.00
2700324RD	Red	1,000'	37.00	35.00
2700324WH	White	1,000'	37.00	35.00
2700324YL	Yellow	1,000'	37.00	35.00
2700324BR	Brown	1,000'	37.00	35.00
2700324OR	Orange	1,000'	37.00	35.00
2700324GN	Green	1,000'	37.00	35.00
2700324BL	Blue	1,000'	37.00	35.00
2700324PR	Purple	1,000'	37.00	35.00
2700324GR	Gray	1,000'	37.00	35.00

18 GAUGE STRANDED

Part No.	Color	Length	1-9	10+
2701118RD	Red	100'	$18.00	$16.00
2701118BK	Black	100'	18.00	16.00
2701118WH	White	100'	18.00	16.00
2701118GN	Green	100'	18.00	16.00
2701218RD	Red	500'	75.00	72.00
2701218BK	Black	500'	75.00	72.00
2701218WH	White	500'	75.00	72.00
2701218GN	Green	500'	75.00	72.00

20 GAUGE STRANDED

Part No.	Color	Length	1-9	10+
2701120RD	Red	100'	$10.90	$10.50
2701120BK	Black	100'	10.90	10.50
2701120WH	White	100'	10.90	10.50
2701220RD	Red	500'	40.00	38.00
2701220BK	Black	500'	40.00	38.00
2701220WH	White	500'	40.00	38.00

22 GAUGE STRANDED

Part No.	Color	Spool Length	1-9	10+
270122RD	Red	25'	$1.65	$1.45
270122BK	Black	25'	1.65	1.45
270122BL	Blue	25'	1.65	1.45
270122WH	White	25'	1.65	1.45
270122GN	Green	25'	1.65	1.45
270122YL	Yellow	25'	1.65	1.45
2701122RD	Red	100'	7.50	7.20
2701122BK	Black	100'	7.50	7.20
2701122WH	White	100'	7.50	7.20
2701122BL	Blue	100'	7.50	7.20
2701122BR	Brown	100'	7.50	7.20
2701122GN	Green	100'	7.50	7.20
2701122OR	Orange	100'	7.50	7.20
2701122YL	Yellow	100'	7.50	7.20
2701322RD	Red	1,000'	42.00	40.00
2701322BK	Black	1,000'	42.00	40.00
2701322YL	Yellow	1,000'	42.00	40.00
2701322WH	White	1,000'	42.00	40.00
2701322GN	Green	1,000'	42.00	40.00
2701322BR	Brown	1,000'	42.00	40.00
2701322OR	Orange	1,000'	42.00	40.00
2701322GY	Grey	1,000'	42.00	40.00
2701322BL	Blue	1,000'	42.00	40.00
2701322PR	Purple	1,000'	42.00	40.00

24 GAUGE STRANDED

Part No.	Color	Spool Length	1-9	10+
2701124RD	Red	100'	$7.50	$7.20
2701124BK	Black	100'	7.50	7.20
2701124WH	White	100'	7.50	7.20
2701324RD	Red	1,000'	41.00	39.00
2701324BK	Black	1,000'	41.00	39.00
2701324WH	White	1,000'	41.00	39.00

RSR

HOOK UP WIRE KIT

- 22Ga Wire Spools, 25' ea
- 10 Spools of assorted colors
- Spools in dispensing box which keeps it neat and clean

Part No.	Description	Price
27WK22SLD10	10 Spools, Solid Wire Kit	$19.50
27WK22STR10	10 Spools, Stranded Wire Kit	23.50

JUMPER WIRE KITS – 350 PIECES

IDEAL FOR BREADBOARDS

22 AWG pre-stripped and pre-formed solid jumper wires. Different of lengths from 0.1" to 5.0".

Part No.	Description	1-9	10+
2700WJW60B	350 Pieces	$9.50	$8.50
2700MJW70	140 Pieces	$3.90	$3.80

SHRINK TUBING

BLACK ONLY, 10' LENGTHS

- Heat shrink tubing
- 50% shrinkable 10' lengths

Part No.	Size	1-9	10+
2700HS1/16	1/16"	$2.25	$1.95
2700HS1/8	1/8"	2.95	2.75
2700HS3/16	3/16"	2.95	2.75
2700HS1/4	1/4"	3.25	3.00
2700HS3/8	3/8"	3.45	3.25
2700HS1/2	1/2"	4.25	4.05

HEAT SHRINK TUBING

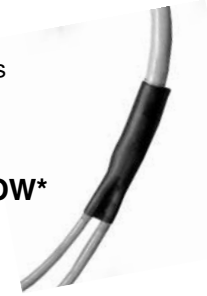
ECONOMY MODEL

The kit contents by original diameter:
1/16", 3/32", 1/8", 3/16", 1/4", 3/8", 1/2", 5/8", 3/4"

8 each of different diameters. Each piece length: 6"

Part No.	1-9	10+
273HSTK1	$26.00	$24.00

3M POLYOLEFIN SHRINK TUBING



- Less than 5% longitudinal shrinkage
- Shrink ratio 2 to 1
- High resistance to solvents, acids, and alkalis
- UL and CSA certified
- Rated at 135C continuous operation
- Specify color along with part number.

PLEASE SPECIFY COLOR AS BELOW*

Black **(BK)** Red **(RD)** Yellow **(YL)**
White **(WH)** Blue **(BL)** Clear **(CL)**

* **Example: 273MHS1BL**

Part No.	Description	Length	Price
273MHS1	1/16"	4'	$2.20
273MHS2	1/8"	4'	2.60
273MHS3	3/16"	4'	2.75
273MHS4	1/4"	4'	3.50
273MHS5	3/8"	4'	3.95
273MHS6	1/2"	4'	4.50
273MHS7	3/4"	4'	5.75
273MHS8	1/16"	100'	24.00
273MHS9	1/8"	100'	28.90
273MHS10	3/16"	100'	32.00
273MHS11	1/4"	100'	42.00
273MHS12	3/8"	100'	44.00
273MHS13	1/2"	100'	47.00

3M HEAT SHRINK TUBING KIT

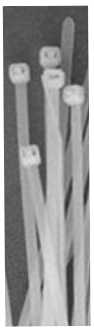
MODEL FP301

The kit contents, by expanded diameter, are as follows:

3/32" (2,36 mm)	5 ea. of 7 colors	35 pieces
1/8" (3,18 mm)	4 ea. of 7 colors	28 pieces
3/16" (4,75 mm)	3 ea. of 7 colors	21 pieces
1/4" (6,35 mm)	3 ea. of 7 colors	21 pieces
3/8" (9,53 mm)	2 ea. of 7 colors	14 pieces
1/2" (12,70 mm)	2 ea. of 7 colors	14 pieces

Part No. 273MFP301KIT • Price: $67.95

CABLE TIES



PACKAGED 100 PCS. PER BAG

Natural Color, Nylon.

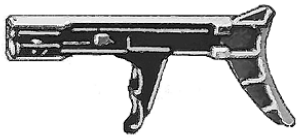
Part No.	Size	1-9	10+
233014	4"	$2.90	$2.70
233016	6"	4.20	3.95
233018	8"	5.50	5.20
233021	4"	2.95	2.75

CABLE TIES KIT

Kit containing total of 100 cable ties. 20 each of the following sizes: 3" x 0.10", 4 3/4" x 0.13", 6"x0.14", 8"x0.1", 10"x0.19"

Part No.	1-9	10+
23CTKIT	$4.95	$4.25

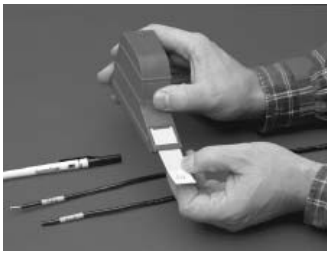
CABLE TIE GUNS



Lightweight pocket size tool is fast and efficient. Compact plastic construction. Simply cinch tie to wire bundle and twist to remove excess strap. Installs ties of tensile strength of 18-50 lbs.

Part No.	Tie Width	Tensile Strength	Prices
2330CTG1	.1" to .3"	For 18-50 lbs.	$9.50

3M ScotchCode™ WRITE-ON DISPENSERS



Quick and easy way to mark wires and cables. System includes label dispenser, self-laminating pressure sensitive labels (250/roll) and a permanent marking pen. When labels are dispensed, they appear in a window that provides a smooth, flat writing surface. Labels are 3/4" x 1 3/8", oil-, dirt-, and heat resistant. The marking pen has an ultra-fine point.

Part No.	Description	Price
2711954	3M™ ScotchCode™ Write-On Dispensers	$28.95
2712201	Label Refill Roll	21.90

LAMP WIRE

- 2 conductor; 18 gauge stranded; brown insulation
- SPT-1

Part No.	Length	Price
2701118LW	100'	$29.95
2701218LW	500'	110.00

WIRE WRAP WIRE

30 AWG WIRE WRAP SOLID WIRE

Part No.	Color	Length	Prices
27001WWRD	Red	100'	$5.95
27003WWRD	Red	1,000'	38.00
27001WWBK	Black	100'	5.95
27003WWBK	Black	1,000'	38.00
27001WWOR	Orange	100'	5.95
27003WWOR	Orange	1,000'	38.00
27001WWBL	Blue	100'	5.95
27003WWBL	Blue	1,000'	38.00
27001WWBR	Brown	100'	5.95
27003WWBR	Brown	1,000'	38.00
27001WWGN	Green	100'	5.95
27003WWGN	Green	1,000'	38.00
27001WWYL	Yellow	100'	5.95
27003WWYL	Yellow	1,000'	38.00
27001WWGR	Gray	100'	5.95
27003WWGR	Gray	1,000'	38.00

NICHROME RESISTANCE WIRE

• Temperature to 3056F (1680 C)

Part No	Gauge	Description	Price
27BNC20-1	20	1/4 lb. spool	$13.30
27BNC20-2	20	1/2 lb. spool	15.95
27BNC22-1	22	1/4 lb. spool	13.50
27BNC22-2	22	1/2 lb. spool	25.20
27BNC24-1	24	1/4 lb. spool	13.95
27BNC24-2	24	1/2 lb. spool	26.95
27BNC26-1	26	1/4 lb. spool	14.50

ROUND COMPUTER CABLE

PVC, FOIL SHIELDED

28AWG

Part No.	Conductors	Size	Prices
2700IC09	9	100'	$35.00
2700IC25	25	100'	56.00

MICROPHONE CABLE

For use with high and low impedance microphones. Braided copper shield. 100' spool length.

Part No.	No. of Conductors	AWG	Price
27001MC2	2	22	$46.95

BUS WIRE

Bare, uninsulated solid wire. Useful for shorts, jumpers, etc.

Part No.	AWG	Length	Price
2705BS20	20	1,000'	$85.00
2705BS22	22	1,000'	75.00

STRAIN RELIEF

Part No.	Description	1-9	10+
2900SR	For SPT-1 line cord "D"-shaped	$0.15	$0.10
2900SRP	For SVT-3 line cord	0.20	0.15

COAX CABLES

RG-58U – COPPER BRAID

50 ohm, 20 AWG solid copper. Foam insulation. 80% copper braid shield.

Part No.	Length	Price
27000RG58	4'	$1.50
27001RG58	100'	24.95
27003RG58	1,000'	140.00

RG-59U – COPPER BRAID

75 ohm, 22 AWG solid copper.
Foam insulation. 80% copper braid shield.

Part No.	Length	Price
27001RG59	100'	$25.00
27003RG59	1,000'	130.00

RG-62U – COPPER BRAID

93 ohm, 22 AWG solid copper.
80% copper braid shield.

Part No.	Length	Prices
27001RG62	100'	$30.00
27003RG62	1,000'	135.00

RG-174U

50 ohm. Thin Flexible co-ax. 26 AWG. 95% copper braid shield.

Part No.	Length	Prices
27001RG174	100'	$35.00
27003RG174	1000'	170.00

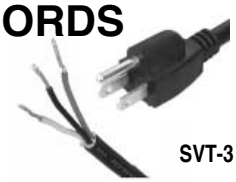
RG-58U – COPPER-PLENUM

Suitable for outdoor and direct burial applications. 50 ohm, 20 AWG solid copper. 90% shield coverage.

Part No.	Length	Prices
27001RG58PL	100'	$110.00
27003RG58PL	1,000'	490.00

POWER SUPPLY CORDS

SPT-1 or SPT-2



SVT-3

Part No.	Type	No. of Conductors	Size	Length	1-9	10+
2706SPT1	SPT-1	2	18/2	5'	$2.20	$1.90
2706SPT2	SPT-2	2	18/2	5'	1.75	1.65
2706SVT3	SVT-3	3	18/3	5'	3.50	3.25

EQUIPMENT CORDS

2706C6

270CR6

Part No.	No. of Conductors	Size	Length	Price
2706C6	3	18/3	6'	$4.95
2706CR6 RT. ANGLE	3	18/3	6'	4.95

ELECTRICAL TAPES

3M TEMFLEX™ VINYL ELECTRICAL TAPE 1700

VINYL INSULATION TAPE

- Protective jacketing, harnessing
- Economy grade, general purpose
- Temperature rating — 176 F / 80 C
- 7 mil x 3/4" — 60' roll

Part No.	1-9	10+
293MT2	$0.95	$0.90

3M SCOTCH™ VINYL ELECTRICAL SUPER 33+

VINYL INSULATION TAPE

- Good as insulator up to 600V for cable splices.
- Flame retardant
- Hot/cold weather resistant
- Resists UV rays, moisture, alkalis, and acids
- 7 mil x 3/4" – 66' roll

Part No.	1-9	10+
293MT1	$5.00	$4.50

3M SCOTCH™ VINYL ELECTRICAL TAPE SUPER 88

VINYL INSULATION TAPE

- Insulator up to 600 V for splices.
- All weather, heavy duty, abrasion resistant
- Temperature rating — 220 F / 105 C
- 8.5 mil x 3/4" — 44' roll

Part No.	1-9	10+
293MT5	$3.95	$3.75

3M SCOTCH™ GLASS CLOTH ELECTRICAL TAPE 27

SPLICING AND TERMINATING TAPE

- Glass cloth tape
- Heat-stable insulation for furnaces and oven controls, motor leads and switches
- High temperature resistance and high mechanical strength
- Temperature rating — 266 F / 130 C
- 7 mil x 1/2" — 66' roll

Part No.	1-9	10+
293MT8	$7.95	$7.50

3M CLOTH GAFFERS #6910 TAPE

- Matte finish, high tack
- Reduced glare and reflection
- Easy tear, 2" x 60 yds.
- Black

Part No.	1-9	10+
293MT11	$26.95	$25.95

3M SCOTCH™ RUBBER TAPE 23

SPLICING AND TERMINATING TAPE

- Primary electrical insulation for splicing all solid dielectric cables through 69KV
- High and low voltage insulating
- Self-fusing rubber tape
- Temperature rating — 194 F / 90 C
- 30 mil x 1 1/2" — 30' roll

Part No.	1-9	10+
293MT4	$25.95	$24.95

INSULATION TAPE SET

Set of 6 rolls (5 meters each) in different colors (yellow, white, green, black, blue, red).

Part No.	1-9	10+
293T5S	$2.25	$1.95

3M TEMFLEX™ RUBBER SPLICING TAPE 2150

SPLICING AND TERMINATING TAPE

- Insulating wires splices, split bolt connections and motor leads up to 600V
- Economical low voltage rubber
- Self-fusing
- Temperature rating — 176 F / 80 C
- 30 mil x 3/4" — 22' roll

Part No.	1-9	10+
293MT7	$2.95	$2.75

GORILLA TAPE 12/35 YARDS

Even better than the grey stuff! Gorilla Tape is twice as thick and sticks better to a wider variety of surfaces, even porous materials like brick, stucco, and concrete. A tough, reinforced backing and rugged, all-weather shell provide long-lasting adhesion. Use it once and you won't go back.

Part No.	Description	1-9	10+
90GG2160	12 Yards	$4.15	$3.95
90GG5120	35 Yards	$8.40	$7.95

LIQUID TAPE

Heavy-bodied black insulating coating which replaces insulating tape in applications where wrap-around tape could not readily be applied. This compound dries quickly to a strong pliable finish that will not crack, peel or chip. It is water and oil proof and may be used outdoors to insulate any electrical terminal, connection or wire splice. Excellent for providing insulation on handles, etc. Voltage rating 400v/mil (min.)

Part No. 29LT10-1762 · Price: $8.90

CONDUCTIVE WIRE GLUE

REPLACE SOLDER WITH GLUE

Wire Glue utilizes the latest advances in microcarbon technology to bring you a highly conductive glue at a fraction the price of competitive products which use precious metals. Each jar contains 0.3 oz. fl. of Wire Glue

Features
- Lead Free
- Simple: One Easy Step
- Reliable: Permanent Bond
- Highly Conductive
- For Both AC and DC Circuits
- Quick and Easy Repairs

Applications
- Surface Mount
- Computer Repair
- Flex Boards
- Connector Repair
- Solar Cell Leads
- RF Shielding

Part No. 03WIREGLUE · Price: $3.90

3M PRONTO™ GEL INSTANT ADHESIVE CA-50

- High strength cyanoacrylate adhesive.
- Ideal for difficult to bond surfaces.
- Gel can be used in non-sag vertical applications.
- Can fill gaps up to .02"
- Slow cure rate allows for repositioning.

Part No.	1-9	10+
03AD2	$28.05	$27.05

KRAZY GLUE SKIN GUARD GEL

Krazy Glue gel. Skin guard formula won't bond skin instantly. No run formula, ideal for porous surfaces. Bonds wood, metal, ceramics, pottery, rubber, vinyl, leather, plastic, and more. 0.07 oz., carded.

Part No.	1-9	10+
90LEKG7664BR	$1.55	$1.45

KRAZY GLUE ALL PURPOSE

The all purpose formula bonds to a wide variety of surfaces. It works great on ceramic, plastic, wood, porcelain, metal, leather, rubber, vinyl and more. .07 oz.

Part No.	1-9	10+
90LEKG58548R	$1.30	1.20

RUBBER CEMENT NO WRINKLE

Elmer's rubber cement provides an easy solution for adhering photos and detailed cut and paste projects. It has a brush on applicator. Excess glue rubs off cleanly, and shows no wrinkles as it dries! It is acid free and photo safe.

Part No.	Description	1-9	10+
90LEE904	4 oz.	$1.55	$1.45
90LEE231	8 oz.	2.99	2.75

CORONA DOPE

This lacquer has excellent dielectric, arc and corona resisting properties, and protects surfaces against moisture. Achieved with a quick drying, black lacquer insulating coating, based on a cellulose resin. Temperature range: to 325 F (163 C). This lacquer is used to coat flybacks, coils, transformers to improve the insulation and weather resistant properties of wires. Dielectric Strength: 3,800 Volts/Mil Min.

Part No.	Description	Prices
29CD10-4702	Bottle With Brush (2 fl. oz.)	$9.50

GLUE GUNS

- Silicon nozzle
- Electronic heating system
- Automatic trigger action

Part No.	Description	Price
03GGC	Glue Gun, Mini (Economy, 15W)	$4.95
03GGLOWTMP	Glue Gun, Low Temp, 120 C, 45W	8.25
03GGLR	Glue Gun Large (60W)	9.95
03GSTKMINI	Glue Sticks (6/Pak) for "03GGC"	1.65
03GSTLOW6	Glue Sticks (6/Pak) for "03GCLOWTMP"	1.65
03GSTK	Glue Sticks (6/Pak) For "03GGLR"	1.95

®M.G. Chemicals

SUPER DUSTER 134 PLUS – 10 OZ.

- 100% ozone safe
- Non flammable
- Zero residue
- Variable valve allows user to control pressure up to 70 PSI
- Non conductive
- Lower Global warming potential

Part No.	Description	Price
25402A	10 Oz.	$8.75

®M.G. Chemicals

SUPER CYANOACRYLATE ADHESIVE

8333-20G 8333-3G

Excellent strength. Quickly bonds rubber, plastics, metal and ceramics. 3 gram size in child resistant enclosure. 20 gram size for industrial users.

Part No.	Description	Price
258333-3G	3 Gram	$2.50
258333-20G	20 G Industrial Users	10.95

MENDA HDPE BOTTLES

SELECT FROM FOUR DIFFERENT TYPES OF PUMPS

- 4 ounce, high density polyethylene bottles
- Translucent, white finish for easy content level viewing
- Square shape for stability, wide opening for easy filling
- Eliminates spraying and splashing
- All pump styles feature one-hand operation, stainless steel, precision machined valves
- Suitable for isopropyl alcohol and many other solvents

SELECT FROM FOLLOWING PUMP STYLES:

- **One-Touch** – perfect for cleaning with cotton balls, pads and brushes
- **Pure-Touch**– purity protector stops fluid from re-entering bottle
- **Take-Along–** has a locking feature, good for field work
- **Pure-Take**– has both locking feature and purity protector

Part No.	Description	Price
2535305	4 oz. with one-touch pump	$18.45
2535505	4 oz. with pure-touch pump	21.85
2535702	4 oz. with take-along pump	33.95
2535803	4 oz. with pure-take pump	29.95

ELMER'S ALL PURPOSE GLUE STICKS

Everyone's favorite for easy, no-mess, permanent bonding. Works on cardboard, foam board, display board, computer paper and more. It goes on smooth and dries fast, clear and colorless. Washable, acid free, photo safe and non-toxic.

Part No.	Description	Price
90LEE517	12 Pack All Purpose Glue Sticks	$10.75

ELMER'S SPRAY ADHESIVE EXTRA STRENGTH

Specially formulated for mounting items to a variety of surfaces, including plastics. Dries fast and clear, sprays wide to cover large areas. 10 oz. can.

Part No.	1-9	10+
90LEE456	$5.45	$5.25

ELMER'S GLUE STICK 3 PK DISAPPEARING PURPLE

The disappearing purple formula goes on purple so it it is easy to see when applying, and dries clear. It is safe, non-toxic and acid free. It washes easily off hands and out of clothes

Part No.	1-9	10+
90LEE562	$3.72	$3.60

ELMER'S CARPENTER'S GLUE

Made just for furniture repair and general household projects. Best for soft & hardwoods, particle board and porous materials. Light color for natural and light stained woods. Indoor use only. Clean up: soap & water when glue is wet; scrape & sand when glue is dry. Set time: 20-30 minutes. 16 oz.

Part No. 90LEE7020 • Price $4.10

ELMER'S GLUE MULTI-PURPOSE

Perfect for interior home repairs and projects, school projects and crafts. Works on a variety of materials - a must-have for the kitchen, den, workshop and garage.

Part No.	1-9	10+
90LEE3830	$3.79	3.69

STANLEY GLUE GUN KIT

The Stanley Glue-Pro DualMelt Glue Gun is ideal for repairs, wood projects, light manufacturing, and model work. It features dual heaters for high capacity, delivering consistent glue flow at 40 percent more glue output. Its covered nozzle prevents burns during use. Other features include an automatic shutoff mechanism; a comfort-grip handle; and a high/low temperature adjustment. The glue gun comes with an extension nozzle, a spreader nozzle, and 18 sticks of assorted glue.

Part No.	Description	Price
90STLGR100	Dual Melt Pro Glue Gun Kit	$33.50
90STLGS25DT	Glue Sticks 12 Pack	$3.45

GORILLA TAPE WOOD GLUE

Gorilla Glue is the finest all purpose premium polyurethane wood glue available today. Gorilla Glue is environmentally friendly, incredibly strong, 100 waterproof, will not freeze, requires no mixing, does not become brittle with age and will not expand or contract in the glue joint. You only need to apply Gorilla Glue to one surface, so your glue lasts twice as long. Clean up is easy and non-hardened glue may be removed with denatured alcohol, thinner or other common solvents. Gorilla Glue is 100% pure and contains no solvents or additives.

Gorilla Glue cures with exposure to moisture in the wood and atmosphere; it is stainable and self-spreading. It bonds exotic and common woods, as well as ceramics, plastic, metals, stone, and much more.

Part No.	Description	1-9	10+
90GG004	4 oz.	$6.15	$5.90
90GG008	8 oz.	$11.10	$10.90
90GG018	18 oz.	$17.10	$16.75

ELMER'S SCHOOL GLUE NO RUN

It is safe, non-toxic and washable, so accidental messes mean easy clean-up!

Part No.	1-9	10+
90LEE304	$1.15	$1.05

GORILLA TAPE GLUE EPOXY

Gorilla Eproxy has an impact-tough formula. Fills voids and bonds uneven and vertical surfaces. 5 minute set, water resistant.

Part No.	1-9	10+
90GG4200	$3.80	$3.60

APRONS BLACK

- Made of chemically resistant PVC
- Flexible and lightweight
- Loops at neck and ties at waist

Part No.	Description	Price
3518050204	27"W x 42"L	$7.50
3518050203	36"W x 42"L	7.95

APRONS

Resists liquids, grease and oil. One size fits all. 100/carton.

35S10485

35S7872

Part No.	Description	Price/Ctn
35S10485	Polyethylene	$25.00
35S7872	Polypropylene	69.00

LAB COAT

Protection from dusty, dirty work areas.

5S10483

35S9647

Part No.	Description	Price
35S10483M	M / 25 per box	$45 / box
35S10483L	L / 25 per box	45 / box
35S10483XL	XL / 25 per box	45 / box
35S9647M	M – Tyvek® Material, Tear Resistant	7.00 ea.
35S9647L	L – Tyvek® Material, Tear Resistant	7.00 ea.
35S9647XL	XL – Tyvek® Material, Tear Resistant	7.00 ea.
35S9647XXL	2X – Tyvek® Material, Tear Resistant	7.00 ea.

DELUXE EAR MUFFS

- Excellent protection against high noise inside or outside
- **Hygiene Kit:** 1 pair replacement pads and 1 pair foam dampers

Part No.	Description	Price
35S9737	Deluxe Ear Muff	$26.00
35S9870	Hygiene Kit	12.00

HARD HATS

- Heavy-duty hard hats to wear on the job
- Adjustable suspension for custom fit

Part No.	Description	Price
35S10512YL	Standard/Yellow	$16.00

VINYL SAFETY TAPE

- Unlaminated, industrial 1" x 36 yds.
- Yellow / black

Part No.	1-9	10+
29MR14	$4.25	$3.95

KEVLAR® GLOVES

- Industrial grade
- Strong, flexible Kevlar® protects hands from cuts and abrasions

Part No.	Description	Price
35S7893	Large / 12 pair	$65.00

SAFETY GLOVES

- General industrial use
- Beaded cuff
- Powder free / 100 per carton

Part No.	Description	Price/Ctn
35S6606M	5 mil – M	$8.00
35S6606L	5 mil – L,	10.50
35S6606XL	5 mil – XL	10.95
35S11428M	8 mil – M	12.00
35S11428L	8 mil – L	19.00
35S11428XL	8mil – XL	19.00

NITRILE GLOVES

- Protects against chemicals and abrasives
- Puncture resistant / latex free / powder free

Part No.	Description	Price
35S9643M	5 mil – M / 100 per carton	$15.00
35S9643L	5 mil – L / 100 per carton	15.00
35S9643XL	5 mil – XL / 100 per carton	15.00
35S7964M	15 mil – M – Heavy duty, flocked lined / 12 pairs	25.00
35S7964L	15 mil – L – Heavy duty, flocked lined / 12 pairs	25.00
35S7964XL	15 mil – XL – Heavy duty, flocked lined / 12 pairs	25.00

DUST MASKS

Non toxic. Provides relief from dust and pollen.

Part No.	Description	Price
35S5687	Standard / 50 per carton	$9.00

DUST RESPIRATORS

Lightweight, protects against dust, dirt and oil-free air. N95 filter.

Part No.	Description	Price
35S5688	3M, 8210 / 20 per Carton	$22.00
35S9633	3M, 8247 / 20 per Carton; Carton Layer Filters Out Odor	68.00
35S6779	3M, 8511 / 10 per Carton; With Exhalation Value N95	32.00

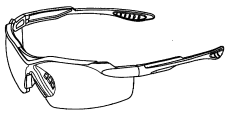
SAFETY GOGGLES – DELUXE

Protect against impact, dust, mist and chemical splash. Wrap around design, soft rubber construction. Can be worn over prescription glasses. Indirect venting, clear lens with anti-fog coating. Meets ANSI Z87.1, CE EN166 specs.

Part No.	1-9	10+
060374	$5.50	$4.95

SAFETY SPECTACLE – DELUXE

- Wrap around design provides maximum protection
- Indoor/outdoor clear, UV 400 lens
- Ultimate lightweight with soft nose and earpiece
- Meets ANSI Z87.1 and CE EN166
- Strap, eye-wear optional



Part No.	Description	1-9	10+
060373	Spectacle	$3.50	$2.95
060379	Strap – Black	0.50	0.40

CO_2 POWER CLEAN™

C_{o_2} Power Clean™ replaces aerosol dusters with simple, safe and 100% pure high velocity CO_2 gas. Five times more powerful than aerosols. Convenient cylinders are disposable and recyclable. The precision control valve is reusable.

- Safe and easy to use!
- Environmentally safe.
- 100% natural pure high pressure gas.
- No CFC's or HCFC's

Safely clean off dust and particles from:

- Camera lenses and equipment.
- Computer keyboards and CRT screens.
- Medical equipment and devices.
- Electronics, circuit boards and more!

SHOULD BE STORED IN A COOL PLACE (UNDER 140°F) AND KEPT AWAY FROM CHILDREN

Part No.	1-9	10+
2551100	$16.95	$15.95
2551101(Refill)	6.55	6.25

®M.G. Chemicals

PENETRATING OIL

450GM (16 OZ.)

A multipurpose penetrating lubricant that protects against rusting and corrosion.

- Penetrates rusted nuts and bolts for easy removal
- Drives out moisture
- Cleans and lubricates
- Safe on plastics and metals
- Contains contact and vapor phase inhibitors that prevent corrosion in both operating and idle conditions, even in humid atmospheres.

Part No.	Description	Price
258472-450G	Aerosol	$10.95

®M.G. Chemicals

SILVER CONDUCTIVE GREASE

7 GM (0.25 OZ.)

Promotes conductivity on sliding surfaces. Silver grease provides maximum electrical and thermal conductivity between sliding surfaces, while providing protection from moisture and corrosion. Typical applications include lubrication of switches or circuit breakers, heat dissipation from transformers, or static grounding on seals or O-rings.

Part No.	Description	Price
258463-7G	Syringe	$22.95

GRAFFITI REMOVER

15 OZ. CAN

Removes spray paint, adhesive, rubber marks, markers, grease and ink.

Part No. 25S9982 • Price: $8.95

®M.G. Chemicals

LCD CLEANING WIPES

NON-STREAKING, ANTI-STATIC, GERMICIDAL

- Gentle formula safely cleans LCD and plasma screens
- Also effective for reducing germs on telephones, keyboards, perepherals, or desktops
- Wipes measure 5" x 6" (12.7 x 15.2cm)
- 50 wipes / pak

Part No.	Description	Price
258242-T	Tub	$6.95

CLEANING OPTIC CLOTH

REUSABLE 9" X 9" MICRO-FIBER 100% LINT FREE POLYESTER

SUITABLE FOR CLASS 1~100 CLEAN ROOMS

10 PCS / BAG

Ideal for cleaning video lenses. Tightly polyester/nylon microfibers make this an extremely durable cleaning cloth. The cloth's microfibers effectively cut through dirt and lift oil and moisture away from the lens surface. The thick, soft cloths are completely non-abrasive and reusable.

FEATURES:

- Lint free, laser cut fiber
- Cleaning effect 10x better compared to regular non micro-fiber wiping cloth
- Will not scratch object's surface
- Suitable for Class 1~100 clean rooms
- Long Use Life

Part No. 03WP13001 • Price: $19.95 / Bag

MICRO-FIBER PRECISION WIPERS

MICRO-FIBER WIPING CLOTH 9" X 9" 100% LINT FREE POLYESTER

SUITABLE FOR CLASS 1~100 CLEAN ROOMS

10 PCS / BAG

Super fine fiber, self-split micro-fiber has perfect cleaning effect. No lint, suitable for 100 Class clean room. Has long life, good absorbency, will not scratch sensitive surfaces, reusable.

Wide variety of applications:

- Panel, Optical, TFT-LCD, LED, CD, CDR, DVD
- Control of organic and spillage solvent
- Any equipment and tools in clean rooms
- Suitable for Class 1~100 clean rooms

Part No. 03WP11001 • Price: $11.95 / Bag

SECONDARY EYE WASH STATION

Provides immediate emergency eye flushing when a larger eye wash station is not close by.

- Includes two 32 oz. squeeze bottles of saline solution, wall mount station and hardware.
- **Size:** 14" x 19" x 5"
- **Capacity:** 64 oz.

Part No. 25H1174 • Price: $59.00

STERILIZATION CABINET

ULTRAVIOLET

Reliable infection control is a vital health concern in laboratories, schools, workplaces and other areas where people share protective eyewear and headsets. This ultraviolet sterilization cabinet offers you the ultimate in eyeglass, goggle and headset sterilization. It is constructed of durable, heavy-gauge steel and incorporate timers.

- 15 minute timer for controlled sterilization
- Safety door switches and key locks
- Sight glass
- Long-life ultraviolet bulbs
- Heavy-duty 8-foot 18/3 grounded neoprene power cord
- Made in the U.S.A.

Part No. 98SGC • Price: $525.00

®M.G. Chemicals

SUPER DUSTER 152

- Alternative to original Super Duster 134A
- Lower cost with 1/10 the global warming potential
- Use for general dusting away from open flames, live circuits and sources of ignition

Choose from 12 oz and 14 oz

Part No.	Description	Price
25402B340G	10 oz. Super Duster	$6.50
25402B450G	14 oz. Super Duster	9.25

®M.G. Chemicals

SUPER WASH

- Fast drying cleaner and degreaser
- Plastic safe
- Rinsing agent
- New 152 propellant
- In compliance for use in food plants
- Tri-lingual label

Part No.	Description	Price
25406B425G	15 oz. Aerosol	$ 15.75

Johnson & Johnson FIRST AID KITS

MODEL H-860

Serves up to 10 People
Items Per Kit: 98

Includes 55 assorted bandages, disposable gloves, scissors, pain relief ointment, instant cold pack and much more.

H-860

MODEL H-743

Serves up to 50 People
Items per Kit: 226

Includes 176 assorted bandages, Extra Strength Tylenol®, burn cream, disposable gloves, scissors and much more.

Part No.	Description	Price
25H860	Model H-860	$42.00
25H743	Model H 743	120.00

FIRST AID KITS – ECONOMICAL

MODEL H-1292

Serves up to 10 People
Items per Kit: 51

Includes assorted bandages, antiseptic wipes, burn cream, gloves, scissors and much more.

H-1294

MODEL H-1293

Serves up to 25 People
Items per Kit: 87

Includes assorted bandages, antiseptic wipes, eye wash, CPR protector and much more.

MODEL H-1294

Serves up to 50 People
Items per Kit: 174

Includes assorted bandages, antiseptic wipes, eye wash, CPR protector, aspirin, adhesive tape and much more.

Part No.	Description	Price
25H1292	Model H-1292	$29.95
25H1293	Model H-1293	42.00
25H1294	Model H-1294	79.00

®M.G. Chemicals

SUPER CONTACT CLEANER

WITH PHENYL ETHER

25801B

- Provides years of superior protection against oxidation and corrosion
- Improves conductivity
- Protects, lubricates and deoxidizes: connectors, contacts, controls, IC's, jacks, switches, battery terminals, plugs, potentiometers and relays.
- Safe on most plastics; protects gold for life

Part No.	Description	1-9	10+
25801B	4.4 Oz. Aerosol	$11.90	$11.05

TECHSPRAY™

ANTI-STATIC (ZERO CHARGE) MAT & TABLE TOP CLEANER

MFR # 1733 – QUART

TechSpray's Zero Charge ESD Table Top and Mat Cleaner is a neutral PH cleaner for general purpose use in production and work areas. The product removes grease, oils, dust and dirt to keep ESD properties at their proper levels. Zero Charge cleans and eliminates charges and leaves an anti-static agent that helps prevent static build-up on mats and table top surfaces.

Features / Benefits
- Rejuvenates anti-static mats
- No ammonia
- Non-corrosive
- Anti-static formulation
- Non abrasive
- Leaves no insulating film

Part No. 251733QT • Price: $14.95

TECHSPRAY™

DIAGNOSTIC FREEZE SPRAY

CHILLS TO –62°

Excellent trouble-shooting aid for use in tracking down thermal intermittents, detects cracks in printed circuit boards and preventing cold solder joints. It also protects heat sensitive components and cools components during mounting to prevent heat damage. It speeds solidification of solder joints to stop movement during the molten state. No CFC's (Ozone friendly). Net weight 10 ounces.

Part No.	1-11	12+
251672-10S	$15.50	$14.50

TECHSPRAY™

SCREEN & KEYBOARD CLEANER

ZERO CHARGE ANTI-STATIC

Antistatic cleaner for glass, CRT and Monitor screens, plastic and metal enclosures. Safe for plastic components on PCBs and assemblies. Removes grease, dust, salts, grime, inks, fingerprints, nicotine. Available in bottle (Net 14 oz.) Saturated Pads (50/box) No CFC's.

Part No.	1-11	12+
251743-QT	$16.90	$15.30
251743-50PK	19.95	19.50

TECHSPRAY™

ANTI-STATIC LOTION

MFR # 1702

Zero Charge Hand Lotion is a special blend of moisturizers that penetrate the skin rapidly leaving skin soft and non-greasy. This anti-static formulation is designed to improve the contact between personnel and grounding devices such as wrist and heel straps. This lotion contains natural products including aloe vera and vitamins A and E. It does not contain silicone, lanolin, squalene or similar materials found in conventional hand lotions that can interfere with PCB manufacturing.

Part No	Description	Price
251702-8FP	8 Oz. Finger Pump	$7.35

TECHSPRAY™

HEAT SINK COMPOUND

Applied under power transistors and other devices that generate heat. Heat (not electrical) conductive. Assists in transferring heat from generating object to metal chasis. Will not harden, dry out or melt. Will not contaminate wave solder baths.

Part No.	Description	Price
251977-DP	4 oz. Tube	$15.80
251978-DP	4 oz. Tube (Silicone Free)	23.25
251978-1	1 lb. Tub (Silicone Free)	52.00

TECHSPRAY™

ANTI-STATIC FREEZER – 10 OZ

MFR # 1747-10S

TechSpray's Anti-Static Freezer is a rapidly evaporating HFC-134a product that contains an anti-static agent. This product is used as a trouble-shooting aid in static sensitive areas for intermittently faulting capacitors, resistors, semiconductors and other defective components.

Features / Benefits
- Non flammable
- Non ozone depleting
- Chills to –40 F
- Zero residue

Part No. 251747-10S • Price: $18.50

®M.G. Chemicals
SUPER DUSTER 134 PLUS – 10 OZ.

- 100% ozone safe
- Non flammable
- Zero residue
- Variable valve allows user to control pressure up to 70 PSI
- Non conductive
- Lower Global warming potential

Part No.	Description	Price
25402A	10 Oz.	$8.75

®M.G. Chemicals
SUPER SHIELD CONDUCTIVE NICKEL COATING – 12 OZ.

REDUCE OR ELIMINATE EMI/RFI INTERFERENCE

A general purpose EMI/RFI shielding spray for plastic electronic enclosures.

- Durable acrylic base with high purity nickel flake.
- One to two mil coating provides 40dB–50dB shielding across frequency range of 5–1,800 MHz.
- Resistivity: 1Ω • mil.
- 10 minute dry time. Recoat in 5 minutes.
- Excellent adhesion to most plastics.

Part No.	Price
25841-340G	$32.95

®M.G. Chemicals
SUPER COLD 134 PLUS – 10 OZ.

Portable size aerosol, 10 oz. can. CFC free/HCFC free, ozone safe.

Part No.	Price
25403A	$9.95

®M.G. Chemicals HEAVY DUTY CLEANER DEGREASER

Cleans and degreases contacts, connectors, printed circuits, relays, tuners, switches and controls.

- Static free
- No residue
- Non flammable
- Non conductive
- Displaces moisture
- Superior penetration
- Very fast evaporation
- Contains HCFC 141B solvent
- Does not contain chlorides
- Dissolves: Wax, tars, and adhesives
- Removes: Oils, lubricants and oxides
- Variable valve allows user to control rate of flow
- Works excellently in vapor degreasers and ultrasonics
- Does not contain any Class 1 ozone depleting substances

Part No.	Descr.	Price
25827A425	15 Oz Aerosol	$13.50

HEAT SINK COMPOUNDS

Part No.	Description	Size	Price
2510-8180	Zinc Oxide filled silicon grease	6.5gms	$2.95
2510-8109	Zinc Oxide filled silicon grease	1 oz.	7.95
2510-8106	Zinc Oxide filled silicon grease & can	1 oz.	7.95
2510-8109	100% synthetic base non-silicon jar	16 oz.	38.95

®M.G. Chemicals SUPER DUSTER 152

- Alternative to original Super Duster 134A
- Lower cost with 1/10 the global warming potential
- Use for general dusting away from open flames, live circuits and sources of ignition

Choose from 12 oz and 14 oz

Part No.	Description	Price
25402B340G	10 oz. Super Duster	$6.50
25402B450G	14 oz. Super Duster	9.25

®M.G. Chemicals CONTACT CLEANER ELECTROSOLVE – 12 OZ.

GENERAL PURPOSE CLEANER/DEGREASER FOR MOST ELECTRONIC PARTS AND EQUIPMENT

- Harmless to most plastics
- Contains no ozone depleting substances
- Instant evaporation
- Zero residue
- Will not detune
- Non conductive
- Noncorrosive
- Safe on most plastics
- Quick penetration
- Removes most soil and flux types
- Variable valve allows user to control rate of flow
- Cleans and degreases contacts, connectors, microprocessors, components, LED's, optical filters, fiber optics, solenoids, rheostats, circuit breakers, selector switches, tuners, hearing aids, coin counters, signals and printed circuits.

Part No.	Price
25409B	$14.90

®M.G. Chemicals HIGH PURITY PROJECTION TUBE COOLANT

Heat transfer fluid for projection tubes.

- Compatible with all major brands.
- High purity, non contaminating.
- For use by qualified technicians only.
- 8 oz.

Part No.	Price
25803-250ML	$6.50

®M.G. Chemicals
AUDIO / VIDEO CLEANER – 8.4 OZ.

STATIC FREE – ZERO RESIDUE – SAFE ON PLASTICS

100% ozone safe. Removes contaminating oils, oxides, dust, dirt and smoke film from sensitive magnetic tape heads, computer disks and drives. Fast evaporation. Use with M.G. cat. #810 Chamois swabs for best results.

Part No.	Price
25407C	$9.95

®M.G. Chemicals FLUX REMOVER FOR PC BOARDS – 14 OZ.

- 100% ozone safe
- Alcohol formula, not for use on live circuits
- No residue
- Static free
- Removes fluxes and soils
- Evaporates quickly
- Safe on most plastics and elastomers
- Variable valve

Part No.	Price
25414C	$12.95

CONTACT CLEANER–1630 BLUE SHOWER

Excellent general purpose cleaner/degreaser. Safe on sensitive components. Excellent wetting and penetration, leaves no residue. Net wt. 16 oz.

Part No.	1-11	12+
251630-16S	$26.95	$25.95

TECHSPRAY™ PRECISION DUSTER

Pressurized dusting gas that is moisture free, zero residue nonflammable. Effectively removes microscopic lint, dust ferrous oxides and other particles. No CFC's (Ozone friendly). Net weight 12 ounces.

Part No.	1-11	12+
251671-10S	$17.95	$16.95

TECHSPRAY™ DIAGNOSTIC FREEZE SPRAY

CHILLS TO –62°

Excellent trouble-shooting aid for use in tracking down thermal intermittents, detects cracks in printed circuit boards and preventing cold solder joints. It also protects heat sensitive components and cools components during mounting to prevent heat damage. It speeds solidification of solder joints to stop movement during the molten state. No CFC's (Ozone friendly). Net weight 10 ounces.

Part No.	1-11	12+
251672-10S	$15.50	$14.50

TECHSPRAY™ FLUX STRIPPER

Heavy duty flux remover and degreaser that effectively removes the most stubborn soils such as a resin, solder fluxes, silicones, grease, waxes, oils and varnishes. No CFC's (Ozone friendly). Net weight 12 ounces.

Part No.	1-11	12+
251676-12S	$27.95	$27.50

®M.G. Chemicals LIQUID ROSIN FLUX–NO CLEAN–4.2 OZ.

- Superior fluxing ability
- Instant wetting
- After soldering, the rosin residue is non-corrosive
- Non conductive, moisture and fungus resistant
- Liquid brush cap
- 100% ozone free.

Part No.	Price
25835-4OZ	$8.75

®M.G. Chemicals LABEL AND ADHESIVE REMOVER

Effectively removes adhesives and sticker residues. Easy to use. Allow solvent to penetrate, then wipe clean. 140G (5 oz.)

Part No.	Price
25836-140G	$8.95

®M.G. Chemicals SUPER WASH

- Fast drying cleaner and degreaser
- Plastic safe
- Rinsing agent
- New 152 propellant
- In compliance for use in food plants
- Tri-lingual label

Part No.	Description	Price
25406B425G	15 oz. Aerosol	$15.75

TECHSPRAY™ SCREEN & KEYBOARD CLEANER

ZERO CHARGE ANTI-STATIC

Antistatic cleaner for glass, CRT and Monitor screens, plastic and metal enclosures. Safe for plastic components on PCBs and assemblies. Removes grease, dust, salts, grime, inks, fingerprints, nicotine. Available in bottle (Net 14 oz.) Saturated Pads (50/box) No CFC's.

Part No.	1-11	12+
251743-QT	$16.90	$15.30
251743-50PK	19.95	19.50

TECHSPRAY™ FOAM SWAB

ANTI STATIC ZERO CHARGE

Flexible tip, thin head for cleaning smaller narrow crevices. 100% lint free, anti static, non contaminating swab. Removes liquid and solid contamination from difficult area. 50 swabs per package.

Part No.	1-11	12+
252303-50	$17.95	$17.25

TECHSPRAY™ TECH CLEAN WIPERS

Non-abrasive, lint and static free non-woven wiper. High absorbancy, solvent resistant, rot and mildew resistant. 9" x 9". 100 per package.

Part No.	1-11	12+
252350-100	$19.95	$19.50

TECHSPRAY™ HEAT SINK COMPOUND

Applied under power transistors and other devices that generate heat. Heat (not electrical) conductive. Assists in transferring heat from generating object to metal chasis. Will not harden, dry out or melt. Will not contaminate wave solder baths.

Part No.	Description	Price
251977-DP	4 oz. Tube	$15.80
251978-DP	4 oz. Tube (Silicone Free)	23.25
251978-1	1 lb. Tub (Silicone Free)	52.00

®M.G. Chemicals ENCAPSULATING AND POTTING COMPOUND – 12 OZ.

- Protects sensitive components
- Protects from impact, vibration, heat, shock, moisture, chemicals, static discharge.
- 100% ozone safe
- Temperature limits — 58 C to 200 C

Part No.	Description	Price
25832B	12 Oz., Black	$31.95

®M.G. Chemicals SAFETY WASH II *(REFORMULATED)*

Cleans and degreased contacts, connectors, fiber optics, printed circuits, relays, tuners, switches

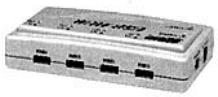
- Low toxicity cleaner and degreaser
- Safe on plastics
- Superior cleaning strength and faster evaporation
- In compliance for use in food plants
- Tri-lingual label
- Not for use on live circuits

Part No.	Description	Price
254050A450G	16 oz aerosol	$14.95
2540501L	33 oz liquid	16.95

USB CABLES REV 2.0

Part No.	Description	Price
045USB30	Type A to Type A; 3'	$1.75
045USB31	Type B to Type B; 3'	1.75
045USB32	Type A to Type A; 6'	1.95
045USB33	Type B to Type B; 6'	1.95
045USB34	Type A to Type A; 10'	2.75
045USB36	Type A to Type B, 3'	1.75
045USB37	Type A to Type B, 6'	1.95
045USB38	Type A to Type B, 10'	2.75

USB HUBS

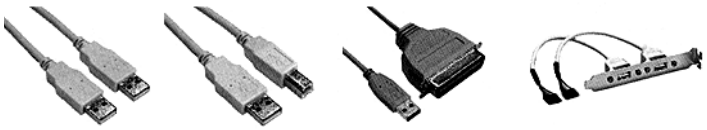


Part No.	Description	Price
045USB1	4 USB Port	$25.00
045USB4	4 Port USB For 3 1/2" Bay	25.00
045USB6	4 Port for Slot Space	25.00

BRACKETS

Part No.	Description	Price
045BR1	Blank	$0.70
045BR3	DB25 Single	0.65
045BR4	DB9 & DB25	0.65
045BR5	DB50 HP	1.50

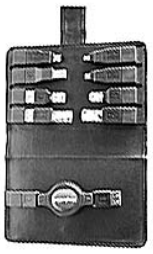
USB CABLES & ADAPTERS



045UBCA1 045UBCA3 045UBCA4 045UBCA5

Part No.	Description	Price
045UBCA1	6' Type A Male to A Male Cable	$4.50
045UBCA2	6- Type A Male to A Female Extension	3.95
045UBCA3	6' Type A Male to B Male	4.50
045UBCA4	6' Type A Male to Cent. 36 Converter	32.95
045UBCA5	Port Adapter, A Type x 2 to 2 x 5 Pin IDS	4.95
045UBCA6	Port Adapter, A Type x 2 to 16 Pin IDS	4.95

USB RETRACTABLE CABLE SET



9-piece USB Adapters Kit with Case

- **General Features:** Black vinyl zippered carrying case (wallet sized)
- **Adapters:**
  - — USB to RJ-45
  - — USB A to mini-B (4-pin standard) – typically seen on digital cameras
  - — USB A to mini-B (4-pin highrose) – typically seen on digital cameras
  - — USB a to mini-B (4-pin) – typically seen on digital cameras
  - — USB A to mini-B (5-pin) – typically seen on digital cameras
  - — USB A to B – typically seen on printers
  - — USB A to PS/2
  - — USB A to A
  - — USB A (male) to USB A (female) rollup extension (approximately 36 inches)
- **Dimensions:** 1 x 5.5 x 4-inches (HxWxD, approximate)

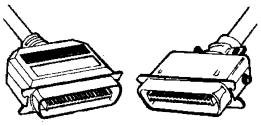
Part No. 045USBKIT2 • Price: $26.95

RETRACTABLE USB CABLE

Part No.	Description	Price
04USB10	USB A Male to B Male, 28"	$5.95
045USB11	USB A Male to A Female, 28"	4.50
045USB13	USB A Male to Mini 4P Mitsumi, 32"	4.50
045USB14	USB A Male to Mini 4P Hirose, 32"	4.50
045USB20	Firewire IEEE 1394 4 Pin to 4 Pin, 32"	7.95
045USB21	Firewire IEEE 1394 6 Pin to 4 Pin, 32"	7.95
045USB22	Firewire IEEE 1394 6 Pin to 6 Pin, 32"	7.95

CENTRONIC CABLES

- Molded and fully shielded with Centronic 36 connectors.
- Male to Female can be used for extension.
- Male to Male can be used from printer to 36-pin data switch.



Part No.	Description	Prices
045CC4	6' Cable M-M	3.75
045CC5	15' Cable M-M	6.95

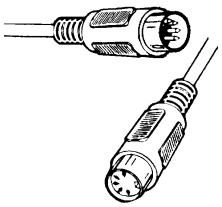
HDMI CABLES

HDMI delivers high definition digital pictures from DVD, set-top boxes to your HDTV or projector or other displays. Gold plated connector cable

Part No.	Description	Price
045HDMI01	HDMI Male to HDMI Male, 3 ft.	$7.95
045HDMI03	HDMI Male to HDMI Male, 10 ft.	14.95

KEYBOARD EXTENSION CABLES

- Ideal for floor mounted PC's
- Designed for IBM style keyboards



Part No.	Description	Prices
045KB1	DIN5 M to F 6'	$2.25
045KB2	DIN5 M to F 10'	2.95
045KB3	DIN5 M to F 25'	5.95
045KB4	DIN5 M to M 6'	2.25

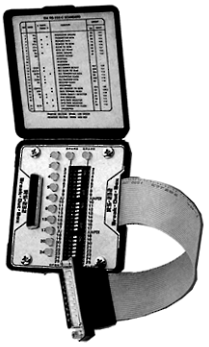
LAN TESTER & CRIMP TOOL + PUNCH TOOL + RJ45 PLUGS (100)

This package includes crimping tool, cable/ LAN tester, wire stripper, punch tool, and 100 pcs of RJ45 modular plugs

Part No. 32LNCTPRJ • Price: $19.95

RSR RS-232 BREAK OUT BOX

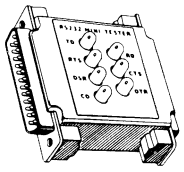
- Provides quick and easy way to troubleshoot or customize any RS-232 data line
- Line powered
- Rewires RS-232 interface
- Dual state LED monitors both positive and negative levels
- Monitors lines 2, 3, 4, 5, 6, 8, 15, 17, 20 and 24
- 48 test points; 20 jumpers included
- Rugged plastic case



Part No. 03BKBX • Price: $26.90

RS-232 MINI TESTER

- DB 25 Male/Female
- Monitors RN 2,3,4,5,6,8, and 20
- Monitors lines: TD, RTS, DSR, CD, RD, CTS and DTR
- Seven Tri-state (2 color) LEDS
- No external power required



Part No. 045MT • Price: $7.95

MINI WIRING ADAPTER

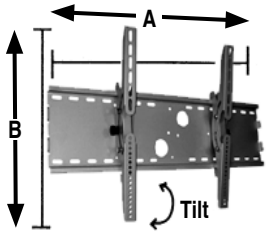
- DB25 Male to Female
- Temporary configuring of data lines is made easy
- No soldering required
- No external power

Part No.	Description	Price
04MW25MF	Mini Wiring Adaptor	$7.95

LCD / PLASMA WALL BRACKET

FOR LARGE LCD/ PLASMAS UP TO 60"

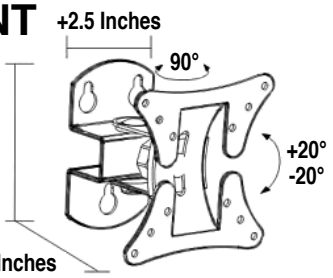
- Weight capacity 165 lbs.
- Adjustable or fixed brackets



Part No.	Description	Size (mm)	Tilt	Price
045LCDBRACLPB2	Adj., Fits 30"–63"	800 x 480 Max. to 75 Min.	+15 /–15	$79.00
045LCDBRACPLB4	Adj., Fits 28"–42"	510 x 330 Max. to 75 Min.	+15 /–15	69.00
045LCDBRACLPB1	Fixed, Fits 30"–63"	800 x 480 Max. to 75 Min.	+0 /–5	69.00
045LCDBRACPLB3	Fixed, Fits 28"–42"	510 x 330 Max to 75 Min.	+0 /–5	59.00
045LCD101B	Adj., Fits 23"–37"	800 x 480 Max to 80 Min.	+15 /–15	65.00

LCD WALL MOUNT BRACKET

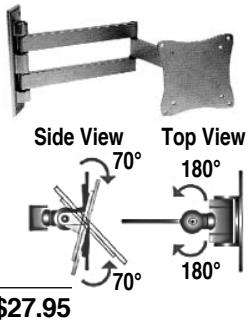
- **LCD:** 10"- 23"
- Tilts and Swivels:
- **Tilt:** 20 , Swivel: 90
- **Vesa:** 75/100mm
- **Max Weight Capacity:** 33lb



Part No. 045LCDBRAC501 • Price: $13.95

LCD / PLASMA WALL BRACKET

- Swing Wall Mount
- Arm Length: 13.9"
- Holds an LCD Screen up to 33 lbs (15 kg)



Part No. 045LCDBRAC101 • Price: $27.95

SecureMount

Allows you to install **flat panel televisions** up to 150 lbs (68 kg).

- No stud required
- D-shaped anchors provide optimal bracing behind the wall, allowing for quick installation into 1/2" – 1 1/4" drywall (compatible with back-to-back 5/8" drywall
- Secure mount hardware requires a 3.5" deep clear space behind the wall
- **Anchors:** 3.75"L x 1"W
- **Product Weight:** 11 oz. per pair
- UL recognized component

Part No.	Description	Price
23SMA3000	1 Pair SecureMount Anchors	$14.50

COMPUTER FLOOR STAND

- Adjustable supports (6" to 10-3/8)
- For use with IBM and clones
- Molded plastic construction

Part No. 045CFS • Price: $8.50

MISCELLANEOUS CABLES

Part No.	Description	Prices
045MCB2	DB25 Ext. Cable 25-pin; M-M; 6'	$5.75
045MCB3	DB25 Ext. Cable 25-pin; M-M; 10'	7.50
045MCB6	DB25 Ext. Cable 25-pin; M-M; 25'	12.50
045MCB4	DB25 Ext. Cable 25-pin; M-F; 6'	6.95
045MCB7	DB25 Ext. Cable 25-pin; M-F;10'	7.50
045MCB8	DB25 Ext. Cable 25-pin; M-F; 25'	14.00
045MCB10	DB25 Ext. Cable 25-pin; M-M 50'	24.00
045MCB11	DB25 Ext. Cable 25-pin; M-F 50'	26.00
045MCB5	Centronic 36-pin Cable; M-M; 10'	9.50
045MCB9	Centronic 36-pin Cable; M-F; 10'	9.50
045MCB1	Serial Cable; DB9 Female to DB25M; 6'	4.95

PRINTER CABLES – PARALLEL

- DB25 male to Centronics 36-pin Male
- Fully shielded

Part No.	Length	Prices
045PPC	6' Cable	$6.50
045PPC2	10' Cable	8.50
045PPC3	25' Cable	12.50
045PPC4	50' Cable	26.00

MODEM CABLES

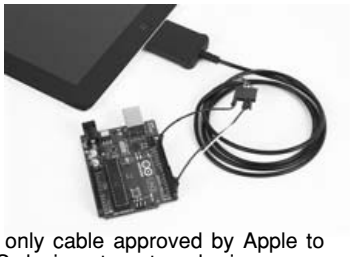
- Ideal for 25-pin serial devices with laptops and interface cards with 9-pin serial port.
- DB9 female to DB25 Male.

Part No.	Length	Prices
045MM1	3' Cable	$2.95
045MM2	6' Cable	4.50
045MM3	12' Cable	5.95
045MM4	25' Cable	7.95

SERIAL CABLES

Part No.	Description	Prices
045VM1	DB9 Male to Male 6'	$3.50
045VM4	DB9 Male to Female 6'	3.50
045VM5	DB9 Male to Female 10'	4.95

REDPARK TTL CABLE FOR IOS



The Redpark TTL Cable for iOS is the latest revision of the popular RedPark Serial Cable. The main difference between this and the original is that a RS-232 serial to TTL adapter is no longer required. This means you can connect it directly to an Arduino using only jumper wires. No soldering and no adapters required.

The RedPark cable is the first and only cable approved by Apple to allow hobbyists to connect their iOS devices to external microcontrollers and sensors! With this cable, you can open up your iPhone, iPad, or iPod touch and let your imagination run wild! Use external sensors in your iOS apps! Talk to an Arduino with your iPhone! The possibilities are unlimited!

Part No. 05MKTTLC1 • Price $59.99

HDMI CABLES

HDMI delivers high definition digital pictures from DVD, set-top boxes to your HDTV or projector or other displays. Gold plated connector cable

Part No.	Description	Price
045HDMI01	HDMI Male to HDMI Male, 3 ft.	$7.95
045HDMI03	HDMI Male to HDMI Male, 10 ft.	14.95

MONITOR CABLES

- Connects display card to monitor

Part No.	Description	Prices
045VM10	HD15 Male to Male 3'	$3.75
045VM6	HDB15 Male to Male 6'	4.95
045VM12	HD15 Male to Male 15'	8.95
045VM8	HDB15 Male to Female 6'	4.95
045VM9	HDB15 Male to Female 12'	7.95

USB TO RS-232 CABLE

- Supports over 1Mbps data transfer
- DB9 to DB25 adapter (Optional)

Part No.	Description	Price
045USB-SERIAL	Cable Only	$9.95
045UN8BE	Cable with adapter	14.95

USB TO PARALLEL PRINTER CABLE

- Connect parallel printer to USB port
- For Windows 98/ME/2000
- No drivers needed for Windows ME/2000, MAC 8.6 and later

Part No. 045USB-PARA • Price $15.25

MOUSE

Part No.	Description	Price
045GN115	3 Button, USB	$3.50
045SWW25	2 Button, USB & PS/2	9.50

MOUSE PAD®

- Cleans and protects roller ball
- Non skid backing, anti-static
- Prevents dirt contamination
- Size 8 5/8" x 10 3/8"

Part No.	1-9	10+
045MP	$1.20	$1.10

MOUSE OPTICAL

- Uses optical sensor instead of mouse ball for more control and accuracy
- Does not need cleaning because it has no moving parts.
- No mouse pad needed; works on most surfaces.

Part No.	Description	Price
045M28148	2 Button + Scroll, PS/2	$14.95
045MPBD69	W Button + Scroll USB & PS/2 Combo	22.95

COMPUTER TEACHING AID

IMPROVES KEYBOARDING SKILL, SPEED & ACCURACY

- Covers keyboard to improve keyboard skills
- Effective results in improving speed and accuracy
- Portable — works with any standard keyboard, including "extended" models
- Durable ABS plastic, stackable for storage

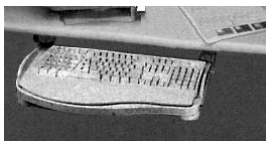
Part No. 04COVER • Price: $14.50

Logitec PERFORMANCE OPTICAL MOUSE

- 8 buttons with scroll
- High performance and precision
- 800 DPI, USB or PS/2

Part No. 045MX • Price: $44.95

KEYBOARD DRAWER UNDER CARRIAGE



- All brackets included for easy assembly
- Smooth ball-bearing movement
- Mouse tray can be installed on left or right side of drawer
- Includes a wrist rest to reduce stress
- Holds standard size MS keyboards
- Measures 22.5" (W) x 1.07" (D) x 2.95" (H)

Part No. 045KDC55M • Price: $23.50

TECHSPRAY

SCREEN & KEYBOARD CLEANER

ZERO CHARGE ANTI-STATIC

Antistatic cleaner for glass, CRT and Monitor screens, plastic and metal enclosures. Safe for plastic components on PCBs and assemblies. Removes grease, dust, salts, grime, inks, fingerprints, nicotine. Available in bottle (Net 14 oz.) Saturated Pads (100/box) No CFC's.

Part No.	1-11	12+
251743-QT	$16.90	$15.30
251743-50PK	19.95	19.50

KEYBOARD WRIST REST

Provides ergonomic support for your wrist. Dimensions 17-5/8" (Length) x 4" (Width)

Part No.	Description	Price
045KWR	Cloth-covered, foam pad wrist rest	$2.95

LOWEST PRICES GUARANTEED!

ADAPTERS

Part No.	Description	Prices
045SA1	DB9 Male to DB25 Female	$2.50
045SA2	DB9 Male to DB25 Male	2.50
045SA3	DB9 Female to DB25 Female	2.50
045SA4	DB9 Female to DB25 Male	2.50
045SA5	DB25 Female to Cent 36 Female	3.95
045SA6	DB25 Female to Cent 36 Male	3.95
045SA7	DB25 Male to Cent 36 Female	3.95
045SA8	DB25 Male to Cent 36 Male	3.95
045VGA1	DB9 Male to HDB15 Male	4.95
045VGA2	DB9 Male to HDB15 Female	4.95
045VGA3	DB9 Female to HDB15 Male	4.95
045VGA4	DB9 Female to HDB15 Female	4.95

GENDER CHANGER

Part No.	Description	Prices
045GC1	Changes DB25 from Male to Female	$2.25
045GC2	Changes DB25 from Female to Male	2.25
045GC3	Changes DB9 from Male to Female	2.25
045GC4	Changes DB9 from Female to Male	2.25
045GC6	Changes Centronic 36 from Female to Male	2.65
045GC7	Changes High Density DB15 from Male to Female	2.95
045GC8	Changes High Density DB15 from Female to Male	2.95

MODULAR ADAPTERS RJ45 AND RJ11/12

Part No.	Description	Prices
045RJA1	RJ11 to DB-9M; 6-pin	$1.95
045RJA2	RJ11 to DB-9F; 6-pin	1.95
045RJA3	RJ11 to DB-25M; 6-pin	1.95
045RJA4	RJ11 to DB-25F; 6-pin	1.95
045RJA5	RJ45 to DB-9M; 8-pin	2.95
045RJA6	RJ45 to DB-9F; 8-pin	2.95
045RJA7	RJ45 to DB-25M; 8-pin	2.95
045RJA8	RJ45 to DB-25F; 8-pin	2.95

USB ADAPTERS

Part No.	Description	Price
045USBAD1	USB A Male – A Male	$1.95
045USBAD2	USB A Male – B Male	1.95
045USBAD3	USB A Male – B Female	2.50
045USBAD4	USB A Female – B Female	1.95
045USBAD5	USB B Female – B Female	1.95
045USBAD8	USB A Male – Mini 4P Hirose	2.50
045USBAD9	USB A Male – Mini 4P Mitsumi	2.50
045USBAD10	USB A Male – Mini 5P Plug	2.50
045USBAD11	USB A Male – Mini 5B Male	3.00
045USBAD12	USB A Male – Mini 5 Male	3.00

ANTI-STATIC WORK MATS

Make your work place safe from static discharge. Made of semiconductive vinyl that provides adequate discharging.

Part No.	Size / Application	Price
03ASW1	11" x 22" – Keyboard	$9.25
03ASW2	19" x 23" – CPU	11.95
03ASW3	24" x 24" – CPU & Keyboard	11.50
03ASW4	8" x 11" – Computer Mouse	4.50

ANTI-STATIC TOUCH PAD

- **Ideal for Keyboards**
- Pad has 1M ohm resistance
- Includes double sided tape install anywhere (keyboard etc.)

Part No.	1-9	10+
03ASTP	4.50	4.25

RSR

WRIST STRAP

Protects IC's and other equipment from static discharge. Grounding cord is a coiled cord 6' or 10' long with 1MΩ resistor.

- **Material**: The conductive elastic band is made of polyster, and woven stainless steel / nickel fibers on interior surface.
- **Band Resistivity**: < 50Ω

Part No.	Description	1-9	10+
0302-BWS150	Medium Size – 6' Cord	$3.50	$2.75
0302-BWS160	Medium Size – 10' Cord	3.95	3.50
0302-BWS201	Adjustable Band – 6' Cord	3.95	3.50
0302-BWS203	Adjustable Band – 10' Cord	4.50	3.95

MOUSE (PS2) AND KEYBOARD EXTENSION CABLE

6 PIN

Part No.	Description	Length	Price
045MS1	Mini Din 6F to 6M	6'	$2.75
045MS2	Mini Din 6F to 6M	10'	4.25
045MS3	Mini Din 6F to 6M	25'	5.95

POWER CORD EXTENSION

- This allows you to extend the length of your PC or monitor power cord.
- 3 prong HP type male plug and female socket
- 6' long cord

Part No. 045PC2 • Price: $3.95

COMPUTER TEACHING AID

IMPROVES KEYBOARDING SKILL, SPEED & ACCURACY

- Covers keyboard to improve keyboard skills
- Effective results in improving speed and accuracy
- Portable — works with any standard keyboard, including "extended" models
- Durable ABS plastic, stackable for storage

Part No. 04COVER • Price: $14.50

CD WALLET

- Holds 40 CDs
- Black color

Part No. 045VKCACD4 • Price: $3.50

CD STORAGE RACK

This stackable CD storage rack can be assembled for 10 CDs and up. Spring loaded so disk will pop out when button is pressed.

Part No.	Description	Price
045DC	Black Color	$6.95
045DC9	White Color	7.95

3M DISKETTES

BOX OF 10

DSHD 3 1/2" 1.44M

	Part No.	Description	Prices
DISKETTES	045D3	DSHD 3 1/2" 1.44M – Box of 10	$9.95

®M.G. Chemicals

SUPER DUSTER 134 PLUS

10 OZ.

- 100% ozone safe
- Non flammable
- Zero residue
- Variable valve allows user to control pressure up to 70 PSI
- Non conductive
- Lower Global warming potential

Part No.	Description	Price
25402A	10 Oz.	$8.75

KEYBOARDS

Standard

With IP Phone

Part No.	Description	Price
045KB21	Standard, USB Beige	7.00
045KB23	Wireless & Mouse, Low Power	40.00
045KB24	Keyboard w/IP Phone Built In	45.00

PREMOISTENED WIPES

For quick and effective cleaning of CRTs, Office copier, glass and contrast enhancements/glare reduction filters.

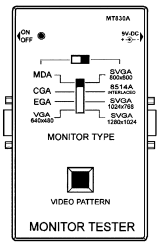
Part No.	Description	Price
045PMW2	30 Wipes Total	9.95

COMPUTER MONITOR TESTER

CHECK MONITORS WITHOUT A COMPUTER!!

MODEL MT830A

The portable computer monitor tester can quickly and easily troubleshoot, test and align computer monitors.



- Test: MDA, CGA, EGA, VGA (640 x 480), SVGA (800 x 600), 8514A (Interlaced), SVGA (1024 x 768), and High Resolution (1280 x 1024) Monitors
- Video Patterns: Color Bars, Cross Hatch, Dots, Color Raster and Windows.
- Two Video connectors: Digital/TTL 9-D and Analog 15-HD
- Powered by a 9V Battery or an External AC Adaptor
- Dimensions: 3.8"W x 5.7"H x 1.5"D

Part No.	Description	Price
041MT830	Computer Monitor Tester	$120.00
16D8-1	Adapter 9V DC	5.95

TRIPP·LITE

STANDBY UPS SYSTEMS

INTERNET 350, INTERNET 525

IO500

IO700

Internet Office (IO) Protection for computer systems, all peripherals and fax/modem against all types of power problems. Auto-system shutdown with free PowerAlert software for 500VA and 700VA models. Up to $25,000 Ultimate Lifetime Insurance for connected equipment. Up to 45 minutes runtime (may vary due to load and battery condition). Low profile and small footprint Tower models to choose from.

Part No.	Mfr. Model No.	Comm. Outlets	Ports	Power	Price
045TRIP32	INTERNET 350SER	6 + RJ11	DB9	350VA	$49.95
045TRIP33	INTERNET 550U	8 + RJ11	USB	525/VA	75.00
TOWER MODELS					
045TRIP34	IO500	6 + RJ11	USB	500VA/280W	109.00
045TRIP35	IO700	6 + (2)	USB	700VA/425W	135.00

TRIPP·LITE

POWERVERTER®

DC-TO-AC POWER INVERTERS

Ultra-compact, these models are ideal for powering most notebook computers, small appliances, tools and mobile office equipment. Advanced, modified sine-wave output. Rugged, all-metal housings, low battery-voltage alarm/shutdown. Models PV150 and PV375 include cigarette lighter plug, while PV600 features positive/ground DC input terminals and cabling.

PV600

Part No.	Mfr. Model	Wattage	Price
045TRIP42	PV150	150W, 300W Peak	$50.00
045TRIP43	PV375	375W, 750W Peak	70.00
045TRIP44	PV600	600W, 1,000W Peak	125.00

HEADPHONES

ECONOMY MODEL:

Ultra-lightweight, 27mm Mylar cone, cord length 4', impedance – 23Ω.

STEREO HEADPHONES WITH VOLUME CONTROL:

Metallic Color with soft self-adjusting inner headpad, 1 3/16" drivers and single-sided 6.5 ft. cable

DELUXE MODEL:

Hi-fi monitor headphones, 40mm super-thin diaphram, impedance – 32Ω, sensitivity: 106db, S.P.L. @ 1KHz, cord length – 9'.

Part No.	Description	Price
045HP002	Economy Model	$3.95
045EP257	Stereo Headphones with Volume Control	10.95
045HP924	Deluxe Model	16.95

HEADSET LIGHTWEIGHT W/BOOM MICROPHONE

Part No.	Description	Price
26HM1	Standard Model	$5.90

CONDENSER MICROPHONE

This microphone has a 3.5mm stereo jack. Operating range 50–16,00 Hz.

Part No. 26CM • Price: $4.50

CLIP-ON MICROPHONE W/MOUNTING HOLDER

- Good for projects
- Creates a hands-free environment.
- Uni-directional electret condenser microphone.
- Compatible with all leading sound cards.

Part No.	Price
26CLIPMC	$3.50

velleman

IN-EAR HEADPHONES & CABLE EXTENSION

- For MD/CD/MP3/MP4
- Airtight soft in-ear cushions
- Frequency range: 18Hz - 20kHz
- Cable length: 2.1ft. + 3.2ft. ext. cable
- Plug: 3.5mm
- Impedance: 32 ohms

Part No. 26HPE4 • Price: $10.50

velleman

PROFESSIONAL STEREO HEADPHONES FOR DJS

- Impedance: 64 ohms
- Maximum power: 3500mW
- Frequency: 5Hz to 30KHz
- Sensitivity: 107dB +/- 3dB (@ 1KHz)
- Input connection: 3.5mm stereo plug
- Cable length: 3ft.
- Adapters:
  - — 6.3mm gold-plated jack (3.5mm/6.3mm adapter) (90)
  - — 6.3mm gold-plated jack (3.5mm/6.3mm adapter) (straight)

Part No. 26HPD15 • Price: $32.00

TRIPP·LITE POWER STRIPS

PS2408, PS3612, PS4816, PS6020, PS7224, PS7224-20

PS3612-20-HW, PS7224-20-HW

RS1215, RS1215-20

RS0615-F

Convenient multiple AC outlets wherever they are needed. Ideal for mounting inside rack enclosures or on walls or work-benches . Sturdy metal housing for demanding environments. 15-foot cord. Rackmount and Hardwire models available. ***Note:*** power strips do not provide surge or line noise protection.

Part No.	Mfr Model #	Outlets	Length	Description	Price
045TRIP19	PS2408	8	24"	15A breaker	$60.00
045TRIP20	PS3612	12	36"	15A breaker	70.00
045TRIP21	PS4816	16	48"	15A breaker	79.95
045TRIP22	PS6020	20	60"	15A breaker	92.00
045TRIP23	PS7224	24	72"	15A breaker	95.00
045TRIP24	PS7224-20	24	72"	20-Amp breaker	110.00
045TRIP25	PS3612-20-HW	12	36"	Hardwire, 20A model for permanent installation	52.00
045TRIP26	PS7224-20-HW	24	72"	Hardwire, 20A model for permanent installation	105.00
045TRIP27	RS1215	12	19"	Rackmount, 15A	78.00
045TRIP28	RS1215-20	12	19"	Rackmount, 20A	74.00
045TRIP29	RS1215-RA	12	19"	Right Angle outlets, 15A	69.00

TRIPP·LITE POWERVERTER®

DC-TO-AC POWER INVERTERS

PV600

Ultra-compact, these models are ideal for powering most notebook computers, small appliances, tools and mobile office equipment. Advanced, modified sine-wave output. Rugged, all-metal housings, low battery-voltage alarm/shutdown. Models ***PV150*** and ***PV375*** include cigarette lighter plug, while ***PV600*** features positive/ground DC input terminals and cabling.

Part No.	Mfr. Model	Wattage	Price
045TRIP42	PV150	150W, 300W Peak	$50.00
045TRIP43	PV375	375W, 750W Peak	70.00
045TRIP44	PV600	600W, 1,000W Peak	125.00

TRIPP·LITE PROTECT IT!™ SURGE SUPPRESSORS

TLP810NET

TLP808TELTV

PS5503M

TLP810SAT

TLP808

STRIKER

Protect Computers, printers/peripherals, home electronics (TV, DVC, etc.), satellite systems, modem/fax, Ethernet connections and more. Standard Duty – plastic housings. Up to $100,000 Ultimate Lifetime Insurance ***(Models TLP810NET and TLP810SAT)***. Other models insured for different amounts. Transformer outlets, diagnostics LED's and interface type connections features enable user to select just the right model.

Part No.	Mfr. Model #	Joules	Cord	Outlets	Description	Price
045TRIP36	TLP810NET	2518	10'	8	2-line RJ11, Coax, RJ45	$57.15
045TRIP37	TLP810SAT	2398	10'	8	RJ11, (2) coax	52.00
045TRIP38	TLP808TELTV	2020	8'	8	1 in/2 out RJ11, coax	40.50
045TRIP49	TLP808	1220	8'	8	Diagnostic LED's	28.95
045TRIP41	STRIKER	480	6'	7	Diagnostic LED's	17.95

TRIPP·LITE STANDBY UPS SYSTEMS

INTERNET 350, INTERNET 525

IO500

IO700

Internet Office (IO) Protection for computer systems, all peripherals and fax/modem against all types of power problems. Auto-system shutdown with free PowerAlert software for 500VA and 700VA models. Up to $25,000 Ultimate Lifetime Insurance for connected equipment. Up to 45 minutes runtime (may vary due to load and battery condition). Low profile and small footprint Tower models to choose from.

Part No.	Mfr. Model No.	Comm. Outlets	Ports	Power	Price
045TRIP32	INTERNET 350SER	6+RJ11	DB9	350VA	$49.95
045TRIP33	INTERNET 550U	8+RJ11	USB	525/VA	75.00
TOWER MODELS					
045TRIP34	IO500	6+RJ11	USB	500VA/280W	109.00
045TRIP35	IO700	6+(2)	USB	700VA/425W	135.00

TRIPP·LITE

SPECIAL APPLICATION SURGE SUPPRESSOR

COAXIAL SURGE SUPPRESSOR

MODEL SUPER 10DBS

Premium protection for satellite, home theater, computer, TV, cable modem, DVD, VCR, stereo and more.

- 2 sets coaxial connectors protects both cable/antenna lines and satellite feeds simultaneously.
- 10 outlets accommodate home entertainment/computer.
- Modem/FAX protection.
- 2,300 joule rating, 10' cord.

Part No. 045S10DBS • Price: $65.00

TRIPP·LITE STANDBY UPS SYSTEMS

INTERNET 350, INTERNET 525

IO500

IO700

Internet Office (IO) Protection for computer systems, all peripherals and fax/modem against all types of power problems. Auto-system shutdown with free PowerAlert software for 500VA and 700VA models. Up to $25,000 Ultimate Lifetime Insurance for connected equipment. Up to 45 minutes runtime (may vary due to load and battery condition). Low profile and small footprint Tower models to choose from.

Part No.	Mfr. Model No.	Comm. Outlets	Ports	Power	Price
045TRIP32	INTERNET 350SER	6+RJ11	DB9	350VA	$49.95
045TRIP33	INTERNET 550U	8+RJ11	USB	525/VA	75.00
TOWER MODELS					
045TRIP34	IO500	6+RJ11	USB	500VA/280W	109.00
045TRIP35	IO700	6+(2)	USB	700VA/425W	135.00

SURGE PROTECTOR POWER STRIP

- Six outlets, plastic; UL Listed
- Master Switch with pilot
- 15A circuit Breaker/Reset Button
- Voltage spike protection: MOV
- 4' cord-AWG 14

Part No. 04526P1 • Price: $5.95

SURGE PROTECTOR POWER STRIP

- 6 outlet.
- 15A circuit breaker.
- Lighted on/off switch.
- Line protection 1 MOV.

Part No. 045CG26M • Price: $9.95

SURGE PROTECTOR POWER STRIP

- 6 Outlets; 3' or 6' Cord
- **ETL & CETL** listed
- Built-in Circuit Breaker
- Heavy Duty Metal Housing

Part No.	Description	Price
045YE20953	3ft Cord	$9.95
045YE20956	6ft Cord	11.25

ROTATING OUTLET POWER STRIP

- 2 fixed + 6 rotating outlets
- 15A resettable circuit breaker
- W/EMI/RFI noise filter
- 6 ft. cord w/TEL/Fax/modem protection

Part No 045S9P81C6T1 • Price: $21.95

POWER CORD

- Works with power supplies or other devices
- Standard 3-prong male plug and HP-type female
- For CPU Power Supply
- 6' long cord

Part No. 045PC1 • Price: $3.50

TRIPP·LITE POWER PROTECTION

ISOBAR SURGE SUPPRESSORS HEAVY DUTY – METAL HOUSINGS

ISOBAR4

ISOBAR6DBS

ISOTEL4ULTRA

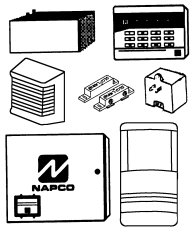
ULTRACOPY

Guaranteed protection for computer and other sensitive equipment. Isolates your computer from lightning and noisy office equipment through ISOBAR's ***Isolated Filter Bank*** technology. Helps eliminate lock-ups, data errors, audio static and video interference. "Cascade Circuitry" provides increasing levels of noise protection with each successive filter bank. Select your level of protection. Up to 2850 joule units. ISOBAR Ultra series offers LED diagnostics for incorrect outlet wiring alert, loss of AC and damage to protection circuitry. Up to $ 50,000 Ultimate Lifetime insurance (most Ultra series models). Heavy duty metal housings.

Part No.	Mfr. Model No.	Outlets	Cord	Joules	Filter Banks	Description	Price
045TRIP1	ISOBAR4	4	6'	2200	2		$71.95
045TRIP2	ISOBAR6	6	6'	2350	3		89.95
045TRIP3	ISOBAR8RM	8	12'	2350	4	9' remote on/off switch	116.55
045TRIP4	ISOBAR4ULTRA	4	6'	2200	2	Diagnostic LED's	80.95
045TRIP5	ISOBAR6ULTRA	6	6'	2350	3	Diagnostic LED's	107.95
045TRIP6	ISOBAR8ULTRA	8	12'	2350	4	Diagnostic LED's	105.25
045TRIP7	ISOTEL4ULTRA	4	6'	2700	2	Fax/modem protection, diagnostic LED's	98.95
045TRIP8	ISOTEL6ULTRA	6	6'	2850	3	Fax/modem protection, diagnostic LED's	107.95
045TRIP9	ISOTEL8ULTRA	8	12'	2850	4	Fax/modem protection, diagnostic LED's	121.45
045TRIP10	IBAR12	12	12'	750	2	15A premium rackmount	152.00
045TRIP11	DRS1215	12	15'	450	-	Non-ISOBAR 15A economy rackmount	76.00
045TRIP12	ISOBAR12ULTRA	12	12'	1200	2	15A premium rackmount, diagnostic LED's	125.00
045TRIP13	IBAR12/20ULTRA	3	12'	1200	1	20A premium rackmount, diagnostic LED's	185.00
045TRIP14	ISOBAR6DBS	6	6'	2850	3	Ideal for mini satellite. low noise. 4 gold coax jacks, 2 RJ11 jacks, diagnostic LED's	107.95
045TRIP15	ISOBLOK2-0	2	-	600	1	Direct plug-in, diagnostic LED's	43.20
045TRIP16	ULTRABLOK428	2	-	600	1	Direct plug-in, sine wave tracking, diagnostic LED's	53.95
045TRIP17	ULTRACOPY	2	-	600	1	Direct plug-in, extra features, 20A, diagnostic LED's	71.95
045TRIP18	ULTRAFAX	2	-	600	1	Direct plug-in, line , modem/fax diagnostic LED's	62.95

COMPLETE SECURITY PACKAGE

COVERS 2 ENTRY POINTS PLUS INTERIOR MOTION



Package Includes:

- 1 — NAPCO Magnum Alert MA1000E Alarm Control / Communicator
- 1 — 16 VAC Transformer
- 1 — NAPCO PIR 700 Motion Detector
- 1 — NAPCO RP1054E Digital Keypad

MA1000e Features:

- 8 Programmable Zones (7 E.O.L. Supervised, 1 N/O)
- 3 keypad activated zones
- Keyswitch input
- Exclusive sensor watch
- Exclusive energy saver circuit
- Supports up to five 4-wire keypads
- 3 flexible modes of programming
- Dealer electronic lockout feature

Part No.	Description	Price
29MA10000E	Alarm Control/Communicator	$169.00
ACCESSORIES		
29SM200	Magnetic Reed Switch	2.50
2912V4AH	12V 4 AH Battery	24.95
29SS50H	Indoor Siren	15.50
29PIR700	Additional Infrared Motion Sensor	18.75

COAX CABLE W/ POWER CABLE

- Ideal for security cameras
- RG59 or RG6 quad shield with power cable – 2 conductor

Part No.	Description	Price
27PRG59-18BK	RG59, 500', Black, Bulk Box	$105.00
27PRG59-18WH	RG59, 500', White, Bulk Box	105.00
27RG6-500BK	RG6U, 500', Black, Bulk Box	155.00
27RG6-500WH	RG6U, 500', White, Bulk Box	155.00

WINDOW BUG – GLASS BREAK DETECTOR

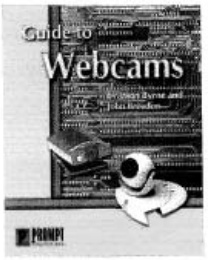
MODEL USP-714W WHITE

No power required. Protects up to 32 square feet. Adjustable for N/C or N/O circuits. Visible deterrent. Automatic reset. Peel and stick mounting. Internal tamper switch.

Part No. 29USP714W • Price: $12.95

GUIDE TO WEBCAMS

Assists in picking out a digital video camera and setting up hardware and software. Covers installation, applications, troubleshooting. Also, maximizing performance, capturing video, lighting, movement and video email. *320 pages.*



Part No. 31S61220 • Price: $55.00

MINI COLOR CAMERA/DVRS

Multiple Types Including MP3 Camera/DVR

All units feature:

- 4 GB memory
- PC connection via USB for easy playback
- Built-in lithium ion battery – charge via computer
- USB port or with supplied power adapter
- Up to 90 minutes available for video/audio
- All models real time audio/video recording in AVI format at 720 x 480 (except Model ECMPCDVR - 640 x 480)

Pen Camera DVR

MP3 Camera Player DVR

Pen Camera DVR – Model EC-MPCDVR

- Pen size, fits in shirt pocket
- Continuous or manual recording

Key Chain Camera DVR –

Model EC-KCDVR
Resembles car remote/alarm

Keychain Camera DVR

Desk/Travel Clock Camera DVR – Model EC-CLKDVR

- Desk/travel clock style with stand
- Motion detection recording feature

Clock Camera DVR

Mini Camera DVR – Model EC- MINIDVR

- Smallest of this series DVR's.
- Sound activated recording

Mini Camera DVR

HD Dashboard Camera DVR – Model EC-LCDDVR

- IR illuminator for night vision
- 2.5" TFT LCD screen for monitoring and reviewing in the field.
- Ideal for windshield, dashboard or desk mounted applications
- Includes multi-position suction bracket and car power cord
- Photos in JPEG format at 1280 x 96

HD Dashboard Camera

Order No	Description	Each
29ECMP3DVR	MP3 player DVR	**$84.00**
29ECMCPDVR	Pen DVR	**63.00**
29ECKCDVR	Key Chain DVR	**63.00**
29ECCLKDVR	Desk Clock DVR	**84.00**
29ECMINIDVR	Mini Camera DVR	**70.00**
29ECLCDDVR	HD dashboard Camera DVR	**125.00**

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DUMMY SECURITY CAMERA ROTATING, WITH MOTION SENSOR & LED

Cost-effective deterrent. Dummy camera that offers motorized pan movement. Features also include a motion sensor and LED which lights when device is turned on.

- Excellent imitation of a real, operating security camera
- Includes motion sensor
- Motorized pan movement
- LED lights when device is turned on
- No wiring needed, 12 different angle adjustments possible
- 6.7" ht. Requires three 1.5V AA *(not included)*

Part No.	1-9	10+
29CAMD3	$ 9.50	$8.25

DigiVue® COMPLETE DIGITAL SECURITY SYSTEM

VIEW AND RECORD FROM ANYWHERE IN THE WORLD VIA INTERNET

- Record and view on your computer remotely via LAN, internet or WAN
- Everything you need including all necessary software
- EDV XV 425 is 15 frames per second
- Requires Pentium 1.8GHz or faster

Complete kit includes:
(1) DigiVue PCI card and software
(4) Indoor/Outdoor cameras
(4) 50 ft. lengths video/power cables
(4) 12VDC regulated power supplies

Part No. 29EDVXV425KIT • Price: $399.00

DigiVue® IP ADDRESSABLE COLOR DOME CAMERAS

***MODEL ECVD-701* – COLOR IP DOME CAMERA**
***MODEL ECVD-721* – COLOR IP DOME W/2 CAMERAS**

View over the internet without extra hardware. Shatter resistant polycarbonate dome. Power supply included. ***721 Model*** features 2 cameras in dome for 270 viewing.

- Built in server
- Connect directly to any RJ45 network connection
- Includes mounting plate, bracket and power supply
- 270 field of view ***(Model ECVD-721)***
- *Power supply included*

Part No.	Description	Price
29ECVD701	Single IP Camera	$250.00
29ECVD721	Dual IP Camera	305.00

velleman COMPONENT ACCESSORIES FOR ALARM/SECURITY PRODUCTS

ROUND REED SWITCH

- Magnetic switch for flush mounting in doors & windows
- Complete with mounting screws
- NC contact
- Mounting hole: 0.37"
- Operating gap: 0.8" max

Part No.	1-9	10+
29HAA24	$3.95	$3.45

REED SWITCH FOR ALARM

- Magnetic switch, standard type
- White ABS
- Mounting with screws or double-sided tape
- Operating gap: max 0.6”
- 2.6" x 0.5" x 0.5"

Part No.	1-9	10+
29HAA25	$4.75	$4.10

ROLLER BALL CONTACT

- Normally OPEN (NO) contact
- Mounting hole: 0.8"
- Rollerball reed contact

Part No.	1-9	10+
29HAA29	$4.35	$4.15

PLENUM COAXIAL CABLES

Part No.	Description	Price
27PCC02	RG59/U – 75Ω, Bare Copper Shield, 20awg Solid BCW – 500’ Roll	265.00
27PCC03	RG58/U – 50Ω, Bare Copper Shield, 20awg Solid BCW – 100’ Roll	69.00
27PCC04	RG58/U – 50Ω, Bare Copper Shield, 20awg Solid BCW – 500’ Roll	285.00

DigiVue® CAMERAS

MODEL EC-624

OUTDOOR COLOR DAY/NIGHT CAMERA

- 1/4" CCD, 0.1 LUX, 6 mm F2.0 lens
- 420 lines resolution
- Built-in iris control
- Over 30 ft. infrared range – automatically switches from color to infrared sensitive black and white in low light.

MODEL EC-667N

WEATHERPROOF DAY/NIGHT COLOR CCD CAMERA WITH EXTENDED INFRARED RANGE

- 1.0 LUX, 420 lines resolution
- Over 45’ infrared range
- 6mm lense, 1/3" color CCD sensor
- Sun-shade housing

MODEL EC-597

Mini weatherproof lipstick color camera

- Perfect for outdoor or wet environment. Mounts without needing any additional cover
- 1/4" CCD, 3.6mm F2.0 lens, 450 lines
- Built-in electronic iris

Part No.	Description	Price
29EC624	Model EC-624	$111.00
29EC667N	Model EC-667N	167.00
29EC597	Model EC-597	97.00

DigiVue® ACCESSORIES

Part No.	Description	Price
29FCVP25	25’ Video Cable	$7.75
29FCVP50	50’ Video Cable	12.50
29FCVP100	100’ Video Cable	23.20
16EPS12800	12V Switching Power Supply	6.95

COAX CABLE W/ POWER CABLE

- Ideal for security cameras
- RG59 or RG6 quad shield with power cable – 2 conductor

Part No.	Description	Price
27PRG59-18BK	RG59, 500’, Black, Bulk Box	$105.00
27PRG59-18WH	RG59, 500’, White, Bulk Box	105.00
27RG6-500BK	RG6U, 500’, Black, Bulk Box	155.00
27RG6-500WH	RG6U, 500’, White, Bulk Box	155.00

COMPONENTS FOR SECURITY CAMERA HOOK-UP

Fig. A

Fig. B

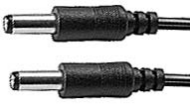


Fig. C

Fig. D

Fig. E

Fig. F

Part No.	Description	Fig.	Price
24BNC59Q	BNC Connector (3 pc.) For RG59 Quad Shield Cable	A	$0.95
24BNC6Q	BNC Connector (3 pc.) For RG 6 Quad Shield Cable	A	0.95
24SCDP401PTN-1	Power Plug Connectors	B	0.90
05VB870DC36	Power Plug To Power Plug DC Cable, 3 ft.	C	3.90
05VB870DC72	Power Plug to Power Plug DC Cable, 6 ft.	C	4.50
05VB870DCN72	Power Plug on One End Only, 6 ft.	C	1.95
29HD203BK	Camera Bracket, Load 2Kg Max.	D	5.95
29HD210	Camera Bracket, Load 6Kg Max.	E	12.90
29HD222	Camera Bracket, Load 0.8Kg Max.	F	7.50

DC POWER DISTRIBUTION FOR 18/9/4 SECURITY CAMERAS

- 12V DC out / 120V or 240V AC switching supply
- 10A continuous *(18 or 9 camera)* / 2A *(4 camera)* models
- 9 individually fused output with LED indicator for each fuse *(18 or 9 camera models)*
- Fuse 500mA

Fig. A

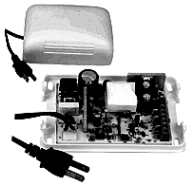


Fig. B

Part No.	Description	Fig.	Price
29PIDB-9	10A for 9 Cameras	A	$75.00
29PIDB-18	10A for 18 Cameras	A	75.00
29PIDB-4	2A for 4 Cameras	B	36.00

POWER ADAPTER

- 12V DC regulated
- 500mA output

Part No. 16DAVCPA12V • Price: $12.50

DAY / NIGHT CAMERA

- 1/3" Sony color IR
- 12VDC, 420TVL
- 0.1 Lux, auto AGC
- 8mm lens, auto white balance
- IR distance: 120 ft.
- 50 IR LEDs
- 12V DC, 1A

Power Adapter Not Included

Part No. 29PI3031F • Price: $85.00

DOME CAMERA

NIGHT / DAY, 18 IR LED

- 1/3" Sony super HAD color CCD
- **Horizontal Resolution:** 420 TV lines
- 0.5 Lux minimum resolution
- **Power:** 12V DC *(adapter not included)*

Part No. 29KP-E3142 • Price: $89.00

DAY / NIGHT CAMERA

- 1/4" Sharp CCD, 24 LEDs
- **Horizontal Resolution**: 420 TV lines
- Illuminates to 40 ft.
- Lens built-in 6mm
- **Power:** 12V DC *(adapter not included)*

Part No. 29PSIF3221C • Price: $65.00

WIRELESS CAMERA AND MONITOR 2.4GHZ KIT

4 CHANNEL SELECTABLE

Wireless 3.5" Color TFT LCD Monitoring System

- Wireless color camera
- 3.5" Color TFT LCD Monitor
- 2.4 Ghz frequency
- Light sensitivity: 0 Lux
- 1/3" CMOS color sensor
- 510x492 (NTSC) Resolution
- 330 TV Lines (horizontal)

Part No. 29PIBM-2409 • Price: $59.00

SUPER MINI CAMERA

- Minimum illumination: 0.5 LUX/F1.2
- Video/DC Switchable
- Video output: BNC female
- Power requirement: 12VDC, 500mA adapter not included; PIPS-121AR AC adapter is recommended.)

Lens not included

Part No. 29SPYS508 • Price: $45.00

MINI WIRELESS CAMERA AND RECEIVER

• 1/3inch Omni Vision CMOS Color CCD • 2.4GHz Ultra Mini Wireless Camera and Receiver
• Channel 1
• 320 Line

Part No. 29CMOS-18SW-P • Price: $59.00

velleman

MINI STROBE LIGHTS – 12VDC

CHOICE OF 5 COLORS

For alarm systems, clubs, warnings
Dimensions: 2.8" x 2.5"
12VDC operation. 1W output
Long life xenon tube
Select lens color: amber, blue, green, red or clear
Protected against polarity reversal. Fully sealed and waterproof.
Flash rate: 120/min.
Life expectancy: 3 x 1,000,000 flashes
Car lighter plug/cord model available for small additional cost *(Order No. 29HAA41A)*

Part No.	Description	1-9	10+
29HAA40A	amber strobe light	$7.95	$7.25
29HAA40B	blue strobe light	7.75	6.50
29HAA40G	green strobe light	7.75	6.50
29HAA40R	red strobe light	7.75	6.50
29HAA40W	clear strobe light	7.75	6.50
29HAA41A	amber strobe with CAR LIGHTER plug/cord	11.75	9.95

PIEZO MINI SUPER SIREN

MODEL SSP-3

- 6-12 VDC
- 300 mA
- 120 dB
- Size: 3 5/8 x 3 1/4 x 3 5/8

Part No. 26SSP3 • Price: $15.95

UL LISTED ARMORED SELF-CONTAINED SIREN

MODEL SSX-51

- 6-12 VDC
- 750 mA @ 12 VDC
- Tamper switch
- Weather resistant
- Size: 5.79" x 5.04" x 4.84"
- Sound Output 105DB

Part No. 26SSX51 • Price: $49.95

ULTRASONIC RODENT REPELLER

FULLY ASSEMBLED

MODEL PC 1000 - STANDARD HOUSEHOLD
MODEL PC 600C - MAXIMUM STRENGTH

- Rodents are repelled by this intense level of ultrasonic sound but humans cannot hear these frequencies
- Non-toxic and safe to use around children and pets
- No need for dangerous physical contact with dead rodents
- Plugs directly into outlet
- Ideal for kitchen, bathrooms, basement, garage
- **Model PC 600C** – Previously only available to commercial accounts. ***Ten times more powerful than the standard household version.***

PC 1000

PC 600C

Part No.	Description	Price
29PC1000	Standard Household	$17.95
29PC600C	Maximum Strength	39.95

ULTRA-MICRO COLOR CAMERA–*MODEL 29ECMP02*

- Low cost, color pinhole lens camera. Only 5/8" x 5/8" x 5/8".
- 1.5 lux sensitivity
- 380 lines resolution
- 12VDC 100MA operation / power adapter not included

Part No.	Description	Price
29ECMP02	Color Camera	$49.00
16DEPS12800	12VDC Switching Power Supply	6.95

MINI-MEGAPHONE – LIGHTWEIGHT PORTABLE

- Features pistol grip w/press-to-talk switch, volume control and wrist strap
- Made of weatherproof ABS plastic
- Uses 6 AA batteries and one 9 volt battery (*not included*)

Part No. 26MP340 • Price: $49.95

DELUXE MEGAPHONE W/SIREN

- Features a built-in switch-selectable electronic alarm siren, pistol grip press-to-talk switch, volume control, and shoulder strap
- Durable weatherproof construction
- Operates from 8 C cells (*not included*)

Part No. 26MP370 • Price: $97.95

DELUXE MEGAPHONE

W/DETACHABLE MICROPHONE & ALARM SIREN

- Features a switch selectable electronic alarm siren, a push-to-talk detachable microphone with volume control, shoulder strap and table stand
- Durable weatherproof contruction
- Uses 8 C cells (*not included*)

Part No. 26MP390 • Price: $132.95

SonicTechnology **SuperEar™**

PERSONAL SOUND ENHANCER

SUPEREAR – 50dB
SUPER EAR PLUS – 107dB

Binoculars for your ears. Powerful sound amplification indoors and outdoors. Nature lovers, senior citizens and sports fans enjoy a whopping 50dB sound gain. Multi-element microphone mounted on swiveling sound boom with protective foam windscreen cover. Also includes premium stereo headphones that deliver crisp, clean sound in the full audio range.

- Pick up bird calls from 100 yards away
- Enjoy sounds of nature as never before
- Use for meetings, lectures, watching TV, ceremonies
- Mount directly onto binoculars, attach to pocket, belt or gear
- Complete with pocket clip, binocular mountings and a 1.5V AAA Battery

SuperEar Plus Model – Ideal for the slight to moderate hearing impaired person. Complies with the Americans with Disabilities (ADA) act for requirements for Assistive Listening Device. Perfect for watching TV, attending meetings or simple conversations. Features a volume control located on the headphone leads for easy adjustment, and auto-off after 30 minutes.

Note: *Use of sound amplification device for easvesdropping purposes is not only impolite, but also illegal.*

Part No.	Description	Price
26SUPEREAR	50dB Unit	$31.50
26SUPEARPLUS	107dB Unit	58.95

velleman MINI INFRARED SECURITY SYSTEM

MODEL PEM7D

Easy to install. Adjustable timer and volume. Includes retro-reflection IR photoelectric beam sensor, power supply and alarm speaker (timer and volume adjustable).

- 23 feet nominal detection range
- IR LED light source
- Speaker output: chime/off/alarm (switch selectable)
- Audio signal duration about 1 sec. For chime, 30 sec. For alarm
- Timer adjustable 3 ~ 30 sec. Before alarm activation
- Adjustable volume
- Working temp –4 F to + 122 F
- Power supply adaptor included

Part No.	Price
29PEM7D	$63.50

velleman SIREN + STROBE IN HOUSING + LED

MODEL SV/PSL3R - RED
MODEL SV/PSL3B - BLUE

FEATURES
- UV-proof, hi-impact (poly-carbonate housing)
- Four strobe lights
- Protected against polarity reversal
- Flashlight or siren with flashlight
- LED light

SPECIFICATIONS
- Operating voltage: 6-15Vdc
- Power consumption: 200mA (siren) / 250mA (strobe)
- Siren output: 110dB
- Dimensions: 120 x 74 x 42mm

Part No.	Description	Price
28SVPSL3R	Red Strobe	$16.95
28SVPSL3B	Blue Strobe	16.95

velleman POWER DOOR LOCK INTERFACE

This central unit drives door lock motors

- Can be activated by a remote control e.g. 600-1B + AM6621
- Adjustable pulse cycle to prevent overheating of the motor
- Complete with connections
- Voltage supply *(required)*: 12Vdc
- Dimensions: 3.94 x 2.83 x 1.18"

Part No. 29802 • Price: $31.95

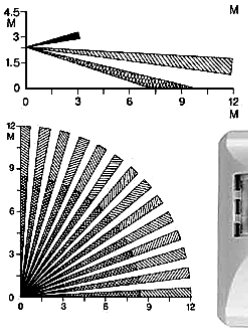
PIR DETECTOR

Ceiling Mount

- 360 detector pattern
- Floor coverage up to 30 ft.
- Installed in any ceiling up to 12 ft.

Part No. 29NAVPIR • Price $16.95

velleman PIR MINI INTRUSION DETECTOR

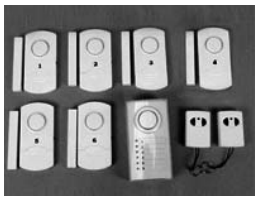


Miniature (2.2" x 1.2" x 2.9") PIR detector that is both reliable and low-cost. Suitable for general security applications, it can be installed virtually anywhere and is protected by an RFI filter. Normally-closed (NC) contact.

- Dual-element pyroelectric sensor. RFI protection
- Programmable puls counter. 12 vert angle adj.
- Surface and corner mounting. 8 to 16VDC operation
- detection pattern: wide angel, 40 ft x 40 ft, 90`, max 42 beams in 3 layers
- Adjustment: vert 0 ~ 12 on calibrated scale
- 16 ft max mounting height (indoor only)
- 2 to 3 second alarm activation delay
- Normally closed relay/microswitch contacts
- Single-shot or pulse-count detection modes
- LED indicator: walk-test indication ON or OFF (selectable)

Part No. 29HAA52 • Price: $39.95

WIRELESS ANTI-THEFT W/REMOTE



- 6 door/window sensors with magnets *(3 x LR44 batteries included)*
- One anti-theft main unit (*needs 3 – LR44 batteries, not included)*
- Two portable remote controls *(needs 23A batteries, 1 included)*
- Arm and disarm the main unit with remote control
- Sensors come with double sided adhesive tape and can be easily attached
- Working distance around 300 ft.

Part No.	Description	Price
29PIRL0506A	Main unit with 6 Sensors & Remotes	$26.00
2800LR44	LR44 Battery for Sensors	1.25
280023A	23A battery for Remote	1.25

EMERGENCY LED EXIT SIGN

- LED indicator and a push button test switch
- Ni-Cd Battery (4.8V, 650mA)
- 24 hour recharge after 90 minute discharge
- Display on both sides

Part No.	Description	Price
29EXITGREEN	Green EXIT sign	$29.00
29EXITRED	Red EXIT Sign	29.00

velleman PORTABLE PUBLIC ADDRESS SYSTEM

7W / 8 OHM

- Light and smart design for easy carrying
- Low noise and excellent performance
- Ideal for schools, factories, meetings, guides and street vendors
- Headset With Dynamic Condense Microphone

SPECIFICATIONS

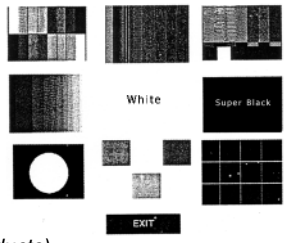
- **Speaker:** 2.5" / 8 ohm
- **Power Output:** 7W max.
- **Frequency Response**: 100 - 13.000Hz (Â 3dB)
- **Length of Waistband:** 3' 4"
- **Power Supply:** DC 9-12V (8 x 1.5V AA-batteries LR6C, *(not incl.)*
- **Weight:** 11.64oz
- **Dimensions:** 6.7" x 2.8" x 2"

Part No. 26PA5U • Price: $37.00

MONITOR TESTER SOFTWARE

ASSISTS TECHNICIANS TESTING, ALIGNING & TROUBLESHOOTING COMPUTER MONITORS

- Self-contained, easy-to-use test pattern generator on 3.5" floppy disk
- Works with all modern VGA and SVGA compatible monitors
- Low cost, provides valuable diagnostic help for beginners and computer servicing professionals.



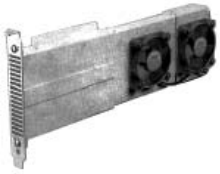
9 of 11 Test Patterns

(No Returns/Exchanges on Software Products)

Part No. 045MTDISK • Price: $19.95

PC AIR CONDITIONER

ADJUSTABLE



- Keeps the interior of high speed PC cool
- Pushes the hot air out from inside of PC case
- Uses one slot and connects to power supply
- Two fans

Part No. 045COFC2 • Price: $24.95

MINI COLOR CAMERA/DVRS

Multiple Types Including MP3 Camera/DVR

All units feature:
- 4 GB memory
- PC connection via USB for easy playback
- Built-in lithium ion battery – charge via computer
- USB port or with supplied power adapter
- Up to 90 minutes available for video/audio
- All models real time audio/video recording in AVI format at 720 x 480 (except Model ECMPCDVR - 640 x 480)

Pen Camera DVR

MP3 Camera Player DVR

Pen Camera DVR – Model EC-MPCDVR
- Pen size, fits in shirt pocket
- Continuous or manual recording

Key Chain Camera DVR –

Model EC-KCDVR
Resembles car remote/alarm

Keychain Camera DVR

Desk/Travel Clock Camera DVR – Model EC-CLKDVR
- Desk/travel clock style with stand
- Motion detection recording feature

Clock Camera DVR

Mini Camera DVR – Model EC- MINIDVR
- Smallest of this series DVR's.
- Sound activated recording

Mini Camera DVR

HD Dashboard Camera DVR – Model EC-LCDDVR
- IR illuminator for night vision
- 2.5" TFT LCD screen for monitoring and reviewing in the field.
- Ideal for windshield, dashboard or desk mounted applications
- Includes multi-position suction bracket and car power cord
- Photos in JPEG format at 1280 x 96

HD Dashboard Camera

Order No	Description	Each
29ECMP3DVR	MP3 player DVR	**$84.00**
29ECMCPDVR	Pen DVR	**63.00**
29ECKCDVR	Key Chain DVR	**63.00**
29ECCLKDVR	Desk Clock DVR	**84.00**
29ECMINIDVR	Mini Camera DVR	**70.00**
29ECLCDDVR	HD dashboard Camera DVR	**125.00**

velleman AIR COMPRESSOR (260 PSI)

WITH GAUGE AND WORK LIGHT

- The perfect device to inflate car, van and truck tires, inflatable boats, balls etc.
- Strong enough for long-term inflating
- Also serves as a light
- Low power consumption
- Top quality, high-pressure air hose with valve connector, 2 extra nozzles and needle
- Car DC plug with 10ft. cable

SPECIFICATIONS
- Pressure: 260 PSI / 18 bar
- Air hose: 13.78"
- Work lamp: 12V / 3W

Part No. 29VTAC1 • Price: $19.95

VALUE 100K

PC Mount; 1/2W; No Bushing; Shaft Length 1" (Nylon); Diameter of body 15/16".

Part No.	10-99	100-999	1000+
18PMM 100K	$0.29	$0.19	$0.09

POTENTIOMETER – 1/4W

PANEL MOUNT

- Solder lugs
- Diameter of body: 5/8"
- Shaft length: 1/2"
- Shaft diameter: 1/4"

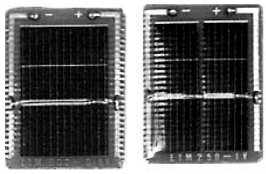
Part No.	1-9	10+
18PMG100	$0.25	$0.20

TRIMMER POTENTIOMETER

1 M Ohm - Size .3" x .2" , Top Adjusted

Part No.	1-9	10+
18WTH1M	$0.35	$0.25

SOLAR CELLS



The solar cells are laminated with high quality resin material on the PC board with excellent moisture protection. These modules are designed for educational kits or projects. 2mm thick. **These can be connected in series or parallel to increase voltage or current output**

Part No.	Voltage (Voc)	Current Isc (typ)	Size mm	No. of Cells/ Modules	1-9	10+
08SLC01	0.5V	250mA	40x80	1	$4.50	$3.75

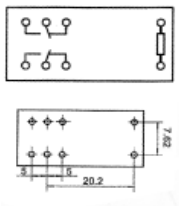
POTENTIOMETER GRAB BAG

30 PIECES

Contains 10 pieces of 100K ohm, 5 pieces 50K ohm, 5 pieces 10K ohm, 5 pieces 1K ohm, 5 pieces 1M ohm.

Part No.	1-9	10+
32POTGRAB2	$9.50	$8.75

RELAY 12VDC



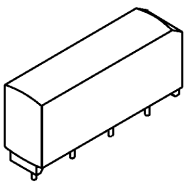
DPDT; 5A

- 2 Form C / DPDT
- Coil resistance – 275 ohms

Part No.	1-9	10+
22R12DPT	$1.75	$1.25

RELAY REED

12V, SIP



- Tyco V23100-V4512-A000
- Contact Arrangement: 1 Form A (SPST)
- All 4 pins – In line and .2" apart

Part No.	1-9	10+
22DR12	$0.85	$0.75

STEPPER MOTOR UNIPOLAR

- DC 5-9V Stepper Motor
- Dual coil both center tapped 50 Ohm coil
- Shaft length = 0.5", Dia. = 0.08"
- 6 wire leads 9" long
- Mounting holes = 1.6" apart
- Epson # STP-32N124

Part No	Special Price
29STP12	$2.50 ~~(Reg. $5.95)~~

STEPPER MOTOR UNIPOLAR

- DC 5-9V Stepper Motor
- Dual coil both center tapped 120 Ohm coil
- 6 wire terminated into a 6pin dual row female connector
- Mounting holes = 1.35" apart
- Epson # MCM-1

Part No	Special Price
29STP19	$2.50 ~~(Reg. $5.25)~~

POWER ADAPTER CHARGER

5V DC @ 200MA

Provides USB port to charge cell phones, tablets and other devices.

Part No	Special Price
16D5DCUSB	$1.40 ~~(Reg. $2.95)~~

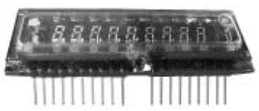
WALL ADAPTER

- Input: 120VAC
- Output: 12VDC - 100 ma
- 2 2.5 mm male plugs
- Can charge 2 devices simaltaneously
- UL

Part No. 16D12CBR • Price: $1.10

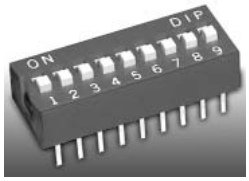
9 DIGIT FLUORESCENT DISPLAY

Glass enclosed, 9 digit fluorescent display. Itron # FG95H1. Japanese mfg. No specs available, for hobby use.



Part No. 08FG95H1 • Price: $4.95

DIP SWITCH - 9 POS



- 18-Pin DIP Switch
- Each Switch SPST

Part No.	Description	Price
17DIP9SS	18 Pin DIP SPST	$0.45

DIP SWITCH 8 POSITION

ALCO GDS08NTS

- Low profile
- 8 position DIP Switch

Part No. 17DIP8SSALCO • Price: $0.35 ~~*(Reg. Price $0.70)*~~

250 WATT POWER SUPPLY

ZIPPY MODEL P1G-6250P

Limited availability, high current. 100% brand new, high quality switching power supplies designed for server, workstation, storage system, IPC applications.

DC OUTPUTS

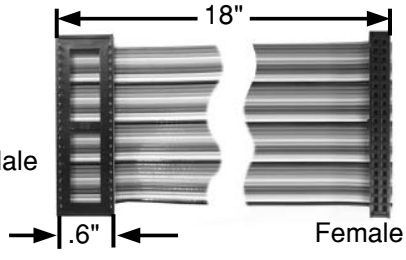
Voltage	Current (max)
5V	25A
12V	12A
-5V	0.5A
-12V	1.0A
3.3V	14A
+5VSB	1.5A

Note: The output power of 5V & 3.3V may not exceed 138 watts. The output power of 5V, 3.3V and 12V may not exceed 228 watts. Total output power not to exceed 250 watts

- AC Input: 90 ~ 264 VAC full range
- Frequency: 60 ~ 50 HZ
- Dimensions: 8" x 4" x 1 1/2", 205 x 100 x 40.5 mm.
- Connectors: (1) 20 pin ATX, (1) ATX 12V, (1) 6 pin P4, (5) 4 pin peripheral, (1) 4 pin floppy
- Over power, over voltage, over current and short circuit protection
- Cooling: TWO 40mm DC fans
- 1% line regulation

Part No.	1-4	5+
01P1G6250P	49.95	39.95

RIBBON CABLE 40 PIN WITH FEMALE SOCKET



- Male IDC Connector
- Length: 18"

Part No.	Special Price
24DVR164CBL	$2.95 ~~*(Reg. $8.95)*~~

MOMENTARY TACT SWITCH

MINIMUM PURCHASE OF 10 PIECES

- SPST NO
- Tact switch
- Size: 6mm x 6mm x 3.5mm

Part No	10-99	100+
17MOMDTS	$0.15	$0.12

BUZZER MINI

5V DC

- Sound output 85db
- Resonant frequency 2.3KHz 300
- Leads bent at 90

Part No.	1-9	10-99	100+
26BZCEB	$0.50	$0.40	$0.30

SERVO MOTOR

Ideal for robotic projects. All specs are at 4.8/6 volts.

- **Size:** 41 x 20 x 37 mm
- **Torque:** 3.5Kg/cm
- **Wt.**: 38 gms

Part No. 29SV66 • Price: $5.25 ~~**(Reg. $8.95)**~~

RCA CABLE

- RCA Male to RCA Male
- Length: 6'

Part No.	Special Price
05CA20B	$0.95 ~~*(Reg. $2.50)*~~

WIRE

A. 2 conductor, 24 Ga each, solid, blue, copper wire (not tinned). Spool of 5,000 ft.; wt. 30lb/spool.

Part No. 27SURP10 • Price: $45.00 ~~**(Reg. $95.00)**~~

B. 3 conductor, 32 Ga each, solid white with red and blue tracer, 6,600 ft. per spool; wt. 50 lb/spool.

Part No. 27SURP20 • Price: $45.00 ~~**(Reg. $120.00)**~~

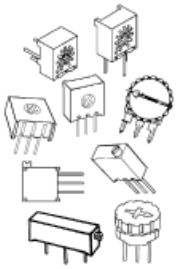
SIREN 6 TONE

- 6 tone electronic siren
- 12V DC operation
- Adjustable mounting bracket
- 4" long, 3.5" dia / color black
- Cable length 15"

Part No. 26ST6 • Price: $6.95

TRIM POT GRAB BAG

PRECISION, MULTI-TURN & SINGLE TURN TRIMMERS



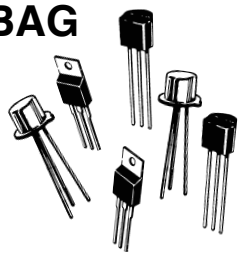
Total of 50 pieces with great mix of assorted precision, multi-turn trim pots and assorted single turn trimmers. Both vertical and horizontal mount, plus other styles and different sizes.

Useful, standard values include all, most or more of the following: 100 ohm, 200 ohm, 500 ohm, 1K, 2K, 5K, 10K, 20K, 50K, 100K, 500K, 1M, 2M. Both cermet and wire-wound styles. Various wattages including 1/4W, 1/2W, 3/4W. Very unique assortment offers widest variety at less than 20 cents per trimmer!

Part No.	1-9	10+
32TRIMGRAB	$11.95	$9.95

TRANSISTOR GRAB BAG

45 PIECE ASSORTMENT

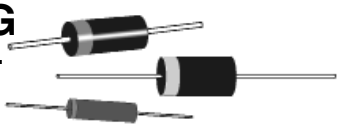


Various transistors — Bipolar (NPN, PNP) and JFET, signal, RF, power types in various packages (TO-92, TO-18, TO-220).

Part No.	1-9	10+
32TRAGRAB	$6.75	$5.95

DIODE GRAB BAG

50 PIECE ASSORTMENT

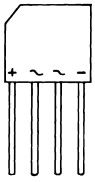


1 amp, 3 amp and 6 amp devices. Includes General Purpose, fast recovery, schottky, and switching diodes. Wide range of voltages. Complete list of part numbers included in each kit for easy identification. About a $ 10.00 value for half the price.

Part No.	1-9	10+
32DIODEGRAB	$4.75	$3.95

BRIDGE RECTIFIER

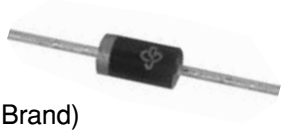
2 A, 200V PIV



Part No.	1-9	10-99	100+
11RS203	$0.25	$0.20	$0.15

RECTIFIER DIODE

1.5 A, 400V



- GP15G (General Semiconductor Brand)

Part No.	1-99	100+
11GP15G	$0.06	$0.04

LED GRAB BAG

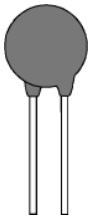
100 PIECE ASSORTMENT

100 piece assortment of Red, Green, Yellow LED's. Excellent variety with regards to colors and sizes. Includes standard 5 mm and 3 mm round dome (T 1 3/4, T 1), plus rectangulars and perhaps more.

Part No.	1-9	10+
32LEDGRAB	$5.90	$5.30

DISC CAPACITOR GRAB BAG

200 PIECE ASSORTMENT

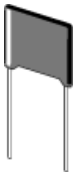


Wide range of values, with many higher (500V & 1KV) voltages plus NPO's. Values including 2.2pF, 10pF, 22pF, 27pF, 47pF, 180pF, 220pF, 470pF, 680pF, .001 F, .0015 F, .002 F, .022 F, .0033 F, .0047 F, .01 F, .033 F, .068 F, .1 F.

Part No.	1-9	10+
32DISKGRAB	$3.90	$3.40

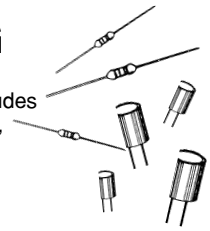
MYLAR CAPACITOR GRAB BAG

100 piece assortment. Wide range of values with working voltage from 50V to 250V. Values including .001 F, .0022 F, .0033 F, .0047 F, .0068 F, .01 F, .022 F, .033 F, .047 F, .1 F, .22 F, .33 F, .47 F, .68 F, 1 F



Part No	1-9	10+
32MYRGRAB	$4.50	$4.25

INDUCTOR GRAB BAG

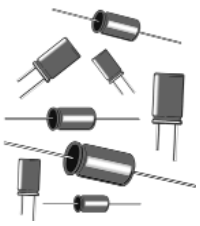


34 piece assortment. Tremendous mix of values. Some axial and radial epoxy fixed inductors. Includes all, most or more than the following values: .39 h, .68 h, 1.2 h, 10 h, 22 h, 150 h, 470 h, 1.5mh, 2.7mh, 3.3mh, 6.8mh, 12mh, 22mh 27mh, 68mh, 120mh, 150mh.

Part No.	1-9	10+
32INDGRAB	$8.95	$7.95

ELECTROLYTIC CAP GRAB BAG

100 PIECE ASSORTMENT



Unbeatable, useful assortment of values includes 2200 F, 1000 F, 470 F, 330 F, 220 F, 100 F, 47 F, 22 F, 10 F, 4.7 F, 2.2 F and 1 F. Great mix of both radial and axial leads and voltages.

Part No.	1-9	10-49	50+
32LYTICGRAB	$4.75	$4.45	$3.99

KEYPAD - 12 BUTTON

- Matrix code
- Ivory color
- Typical telephone keypad

Part No.	Special Price
17KPSPECIAL	$2.75 *~~(Reg. $6.50)~~*

DESOLDER PUMP

High quality desolder pump. Heavy duty plastic construction. Close out item. 7.3" total length. Powerful suction. Black color, ESD safe. Teflon nozzle.

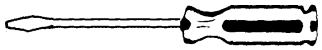
Part No.	Description	1-9	10-99	100+
060828	Desolder Pump	$3.00	$2.50	$2.00
060882	Extra Tip	0.60	0.55	0.50

SCREWDRIVERS

2 PC SET

- Phillip #2 x 4"
- Slotted 1/4" x 4"

PHILLIPS



SLOTTED

Part No. 0601SPSET • Price: $1.75 ~~***(Reg. $2.95)***~~

NUT DRIVERS

Chrome plated, 1/2" nut driver.

Part No.	1-9	10+
060169	$1.25	$0.95

Crescent® SCREWDRIVER PHILLIP #4

MODEL SDFP88

Shaft Length – 8"
Total Length – 13"

Part No. 0601SDFP88 • Price: $4.90

STEREO TO MONO MINI PLUG ADAPTOR

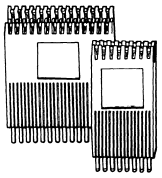
FEMALE TO MALE
HI-REL, 3.5 MM

Part No	1-9	10+
0703SMAM	$1.00	$0.90

3M TEST CLIP

40 PIN

Designed for easier DIP IC testing and troubleshooting.
Width 0.6"



Part No. 03TC40-3M • Price: $9.90 (*Reg $14.95)*

& CHICAGO CASE COMPANY
ATTACHE TOOL CASE

INDESTRUCTO SERIES

- High impact polyethylene case
- Extra heavy duty aluminum frame
- Full length piano hinge
- Black color, 18' x 13' x 6"
- Two tool pallets

Tools Not Included

Part No. 0611188RSR • Price: $75.00 ~~***(Reg. Price $150)***~~

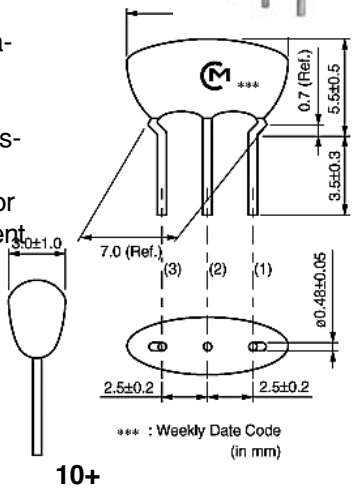
CERAMIC RESONATOR

3-LEAD 4.00MHZ RESONATOR

MODEL CSTLS_G

MHz Lead Type – Standard Frequency Tolerance for General Usage

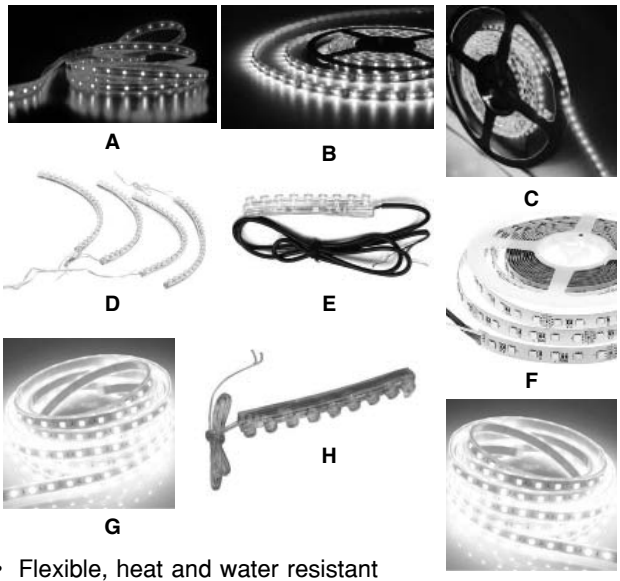
- Built in load capacitors
- Stable over a wide temperature range
- Compact, lightweight and exhibits superior shock resistance performance
- Enable the design of oscillator circuits requiring no adjustment



Applications
- DTMF generators
- Clock oscillators for microcomputers
- Remote control units

Part No.	1-9	10+
15CST4.00M	$0.70	$0.60

LED STRIPS



- Flexible, heat and water resistant
- Super bright, low power consumption
- Easy installation, double sided tape and connecting wires
- Typically used on ATVs, Headlights, Motorcycles, and more

Part No.	Description	Fig	Price
78LEDRD75	45 Red LEDs, 75cm long	A	$4.50
78LEDGR60	30 Green LEDs, 60cm long	B	3.90
78LEDGR75	45 Green LEDs, 75cm long	C	4.50
78LEDBL30	15 Blue LEDs, 30cm long	D	2.50
78LEDWH9	9 White LEDs, 20cm long	E	0.20
78LEDWH15	9 Cool White LEDs, 15cm long	F	4.50
78LEDWH25	15 Cool White LEDs, 25cm long	G	3.90
78LEDWH24	24 White LEDs, 24cm long	H	4.50
78LEDWH45	45 White LEDs, 75cm long	I	2.50

BICOLOR LED

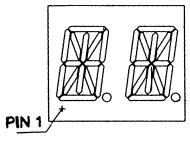
AVAGO / AGILENT / HP

- HLMP – 4,000
- 5mm, T 1-3/4
- Min. purchase of 10
- Two different colors depending on leads used – Red / Green

Part No.	10-99	100+
08HLMP4000	$0.15	$0.12

ALPHANUMERIC DUAL

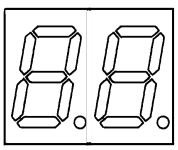
- 6 dual digit alphanumeric display
- 0.56"; green color; Lite On LTP-3790JG



Part No.	1-9	10-99	100+
08LTP3790JG	$0.70	$0.60	$0.50

LITE ON DUAL 7 SEG. DISPLAY GREEN

- 0.4", CA Dual Display
- Mounted on spacer



Part No.	1-9	10-99	100+
08LTD4608HG	$0.40	0.35	0.30

OPTO BONANZA

LED / QTY PRICING

Typ. Intensity 1.5mcd.

Part No.	Description	1K	10K
08L32RD	Red; T1; 3mm	$0.035	$0.025
08L53RD	Red; T1-3/4; 5mm	0.035	0.025

PHOTO-TRANSISTORS

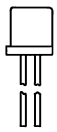
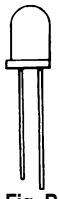
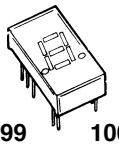



Fig. A Fig. B

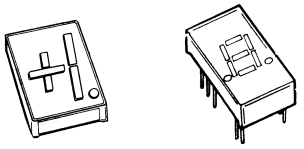
Part No.	Fig.	1-9	10-99	100+
08OP500W	A	0.40	0.30	0.25
08OP501SW	B	0.40	0.30	0.25

7 SEG. DISPLAY SINGLE



Part No.	Description	10-99	100+
08TIE812	0.8"; C.A.; Single Digit	0.60	0.50
08TIE813	0.8"; C.C.; Single Digit	0.60	0.50

7 SEG DISPLAY

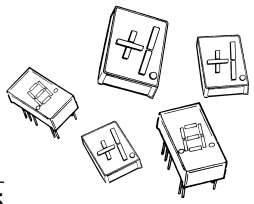


Part No.	Description	10-99	100+
08MAN3051	0.3"; C.A.; Sng.Dig.; Green	$0.40	$0.30
08MAN6520	0.6"; C.A.; Sng. Dig.; Green	0.40	0.30
08MAN6530	0.6"; C.A; Overflow; Green	0.25	0.20
08MAN6550	0.6"; C.C.; Overflow Dig.; Green	0.25	0.20
08MAN6930	0.6"; C.A.; Overflow; Red	0.25	0.20

SEVEN SEGMENT DISPLAY GRAB BAG

ASST SIZES AND COLORS

10 PCS./BAG



Part No. 32GRABSEG • Price $2.95

LED PANEL INDICATOR LAMP

- Red plastic housing
- 1/2 inch mounting
- Long, wire leads

Part No.	1-9	10-99	100+
091090A112	$0.45	$0.42	$0.39

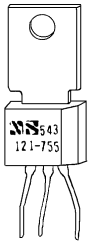
WALL ADAPTER

- Input: 120VAC
- Output: 12VDC - 300 ma
- 5.5Mm barrel plug
- 2.5Mm center positive
- White
- UL

Part No. 16D12-.3 • Price: $1.65

TRANSISTOR

NPN-Si, AF power amp, Zenith #121-755 (cross to ECG 190®). Pre-formed leads.



Part No.	1-9	10-99	100+
11121-75	$0.65	$0.49	$0.45

AXIAL LEAD METALLIZED POLYESTER CAPS

ALL 100V

SOLD IN 100 PC. LOTS ONLY

Part No.	Value	Price/Pkg.
14MP100.015U	.015 F 100V 10%	3.00

RADIAL LEAD ELECTROLYTIC CAPS

SELLING "AS IS" – OLDER DATE CODES

SOLD IN 100 PC. LOTS ONLY

Part No.	Value	Price/Pkg.
14ER10330U	330 F 10V	4.00
14ER6.3330U	330 F 6.3V	3.00
14ER6.3470U	470 F 6.3V	2.00
14ER10470U	470 F 10V	3.00
14ER6.31000U	1000 F 6.3V	4.00

NON-POLAR ELECTROLYTIC CAP

10 PC. MINIMUM

4.7 f, 160V.

Part No.	10-99	100+
14ERN1604.7U	$0.24	$0.19

RSR LIGHT METER ADAPTOR

MODEL LX-02

- 0 to 50,000 in 3 ranges
- Output 0.1mV DC per 1,10,100 Lux
- Used on any digital meter to read lux
- Accuracy: 5% +0.1mV
- Size: 3.9" x 1.9" x 1.0"

Part No.	Price
01LX02	$39.00

28 PIN SOLDER PRACTICE IC'S

13 PIECE TUBE

28 pin dual-in-line (DIP) package IC's for solder practice usage. Unmarked and not guaranteed functionally or electrically. Sold "by the tube". Each tube contains 13 IC's.

Part No.	Description	Price
1028PTUBE	13 piece tube of 28 pin DIP IC's 5/8" width. For solder practice only	$2.95

40 AND 64 PIN MACHINE TOOLED WIRE WRAP SOCKETS

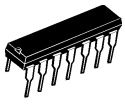
GOLD LEADS

Level 3 machine tooled wire-wrap socket with gold leads and recepticles. Perfect for proto-typing with 40 pin .7" width and 64 pin 1" width devices.

Part No.	Description	Price
19SURP40WW	40 Pin Wire Wrap Socket	$5.95
19SURP64WW	64 Pin Wire Wrap Socket	9.50

INTEGRATED CIRCUITS

MINIMUM PURCHASE OF 10 PIECES FOR ANY IC TYPE



Indust. No.	Part No.	10-99	100+
74H00	1074H00	$0.10	$0.08
74L00	1074L00	0.10	0.08
74HCU04	1074HCU04	0.10	0.08
27C512N (One Shot)	1027C512N	1.20	1.00
7403	107403	0.15	0.12
74LS00	1074LS00	0.30	0.20
74LS04	1074LS04	0.40	0.24
74LS08	1074LS08	0.40	0.24
74F74	1074F74	0.12	0.08
NE555	10555	0.22	0.15
LM741	10741	0.22	0.15
LM10	10LM10	1.20	0.85

COIL – .39 μH

16 turn coil of .39 h inductance. Q=100 @ 50MHz. SFR 600 MHz (min.). Ideally suited for high frequency oscillators (around 80 MHz to 100 MHz)

Part No.	1-9	10-99	100+
15SCOIL	$0.30	$0.25	$0.20

SIP RESISTOR NETWORK

10 PCS. PER PAK

Part No.	Description	Price/Pak
13SIP1	390Ω 10 Pins, 5 Resistor	$0.50
13SIP2	4.7K 8 Pins, 4 Resistors	0.50

DIP RESISTOR

ISOLATED RESISTORS – 10 PCS. PER PAK

Part No.	Description	Price/Pak
13DIP2	3.3KΩ 16 Pins, 8 Resistors	1.00

CAPACITORS

MYLAR AXIAL;
TOLERANCE +5 TO+10%
VARIOUS VALUE AND VOLTAGES

Part No.	Value	Voltage	10-99	100+
14MA200.01U	.01 F	200V	$0.06	$0.04
14MA100.1U	.1 F	100V	0.06	0.04

CAPACITOR MYLAR RADIAL

.47 F 250V

Size: 0.9" x 0.5" x 0.3"
Lead Spacing: 0.6"

Part No.	1-99	100-999	1000+
14MR250.47U	$0.16	$0.12	$0.10

MYLAR BOX CAP

.047 f 1,000V; 7/8" lead spacing

Part No.	1-99	100-999	1,000+
14MR1K.047U	$0.08	$0.07	$0.06

LCD DISPLAY 16 X 2

HITACHI: LM071L

- 16 x 2 LCD module
- 5 x 7 dot matrix characters
- 5mm charcter height
- 3.15" x 1.41" x 0.37" size
- Spec Sheet download at ***http://www.elexp.com/srp_cd40.htm***

Part No. 08LCD40 • Price $5.95

INFRARED DETECTOR

SHARP: GP1U27S

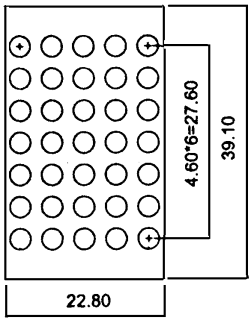
- Infrared detecting unit for remote control
- For general electronic equipment use – AV equipment, home appliance, OA equipment
- BPF center frequency 40KHz

Part No.	1-9	10-99	100+
08GP1U27S	$0.90	$0.80	$0.70

LED MATRIX DISPLAY

5 X 7 MATRIX; 1.5" ht

Light up red.

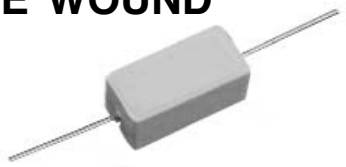


Part No.	Description	1-9	10+
08F12571AS	Anode Column, Cathode Row	$1.50	$1.20
08FYM12571BS	Cathode Column, Anode Row	1.50	1.20

RESISTORS WIRE WOUND

5W; +10%

VALUE: 5.6 OHM, 68



Part No.	Value	10-99	100+
130510 5.6	5.6 ohm	$0.15	$0.10
130510 68	68 ohm	0.15	0.10

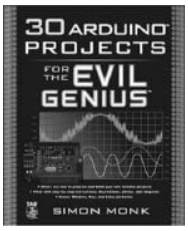
MECHATRONICS FOR THE EVIL GENIUS

25 BUILD-IT-YOURSELF PROJECTS

The popular Evil Genius format provides a fun and inexpensive way to learn how to combine electronics with mechanics. Projects include: mechanical race car, combat robot, ionic motor, electromagnet, analog computer, mechantronic head, coin tosser, robotic arm, light beam, remote control and more. Includes parts list and tool bin for each project. Covers "How to Solder", component recognition/identification and how to read schematic diagrams. 350 pages.

Part No. 31M0071457593 • Price: $24.95

30 ARDUINO PROJECTS FOR THE EVIL GENIUS



This wickedly inventive guide shows you how to program and build a variety of projects with the Arduino microcontroller development system. Covering Windows, Mac, and Linux platforms, 30 Arduino Projects for the Evil Genius gets you up to speed with the simplified C programming you need to know--no prior programming experience necessary.
Using easy-to-find components and equipment, this do-it-yourself book explains how to attach an Arduino board to your computer, program it, and connect electronics to it to create fiendishly fun projects.

Part # 31M007174133X • Price: $24.95

BUILD YOUR OWN PRINTED CIRCUIT BOARD

Complete with CD-ROM, this 240 page book offers step-by-step instructions on designing and creating a printed circuit board and how to use it with a PIC Microcontroler. Shows how to generate CAM (Computer Aided Manufacturing) files and produce your own boards. Covers entire board process: design, size, layout, autorouting and fabrication. CD-ROM includes EagleCAD design tool.

Part No. 31M0071427838 • Price: $29.95

NTE SEMICONDUCTOR CROSS REFERENCE/ REPLACEMENT GUIDE

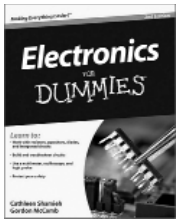
NEWEST EDITION ALWAYS SHIPPED

The NTE Catalog has become the industry's guide when you need semiconductors. It contains cross references to American, European & Japanese industrial and commercial devices. New cross references and devices always being added.

Part No. 31NTE • Price: $6.75

ELECTRONICS FOR DUMMIES

2ND EDITION



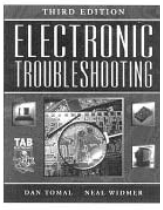
The leading beginner's guide to electronics — over 75,000 copies sold in the previous edition — now completely updated!

In its first edition, this fun and easy guide quickly established itself as *the* go-to resource for novice electronics hobbyists and do-it-yourselfers. Now updated to cover all the latest developments and trends and expanded with new projects and new full-color illustrations, it's just what people need to take the plunge into the world of electronics

- Features lots of new projects — including over 20 breadboard projects that can be done in 10 minutes or less.
- Contains eight pages of all-new full-color photos illustrating techniques and finished projects.
- Thoroughly updated with all the latest information on tools and safety, multimeters, oscilloscopes, logic probes, resistors, capacitors, transistors, breadboard circuits, printed circuit boards, and microcontroller implementation and programming.

Part No. 31WI286975 • Price $24.99

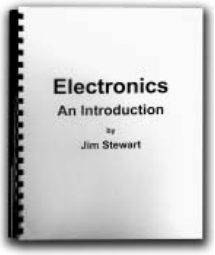
ELECTRONIC TROUBLESHOOTING



Updated to include current devices and equipment, this 368 page book features many "tricks of the trade" for trouble shooting and repair. Complete with handy quick problem solving graphs and flowcharts. Apendices cover specific techniques for common consumer electronics. Authored by Professors of Electronics from major universities.

Part No. 31S0071423076 • Price: $49.95

ELECTRONICS AN INTRODUCTION



An excellent introduction to electronicsfor students in medical field. Basic concepts, electronic devices, amplifers, digital electronics and microprocessors

Part # 31JWSEAI • Price: $39.95

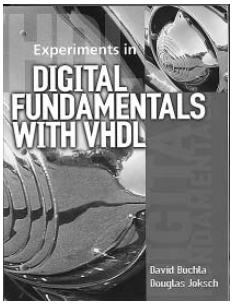
ALL NEW ELECTRONICS SELF-TEACHING GUIDE

At long last, an updated revision of the bestselling self-teaching electronics guide!

- Although basic electronics principles have not changed since the previous edition was published in 1986, the application of those principles certainly has and this guide walks readers through these exciting updates.
- Incorporates the prevalence of integrated circuits in today's world of electronics and discusses the changes to the technology, including the capacity of an integrated circuit.
- Encourages readers to take advantage of the tremendous wealth of knowledge of electronics contained within this unparalleled reference.

Part No. 31WI0470289617 • Price: $34.99

EXPERIMENTS IN DIGITAL FUNDAMENTALS WITH VHDL



Provides laboratory exercises that support *Digital Fundamentals with VHDL* by Tom Floyd. The manual supports the PLDT-2 and PLDT-3 boards from *RSR Electronics*, as well as the DeVry University board, and the Altera University Program board. Each of these boards is described in detail including pin numbers as needed. The manual provides a bridge between fixed-function logic (standard TTL and CMOS ICs) and VHDL logic by providing two procedures for most experiments – one for a fixed function experiment, the other for a VHDL experiment. The VHDL procedure tends to be tutorial in nature, as most of the VHDL programs are complete but may have a line or two left to complete (with lots of examples.) The manual also has two tutorial exercises. The tutorial exercises are designed to introduce the two compilers supported by the manual – Xilinx and Altera. A CD containing all of the programs in the manual simplifies entering them into the editor.

Part No. 31P0130453056 • Price: $91.50

PARALLAX

BASIC ANALOG AND DIGITAL

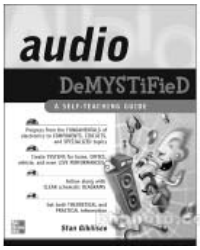
STAMPS IN CLASS CURRICULUM

Basic Analog and Digital is a 162-page tutorial that covers the essentials of 8-bit A/D and D/A conversion using a BASIC Stamp module. The text introduces PBASIC commands for A/D conversion with resistor / capacitor circuits, interfacing an ADC0831 8-bit A/D converter, scaling analog outputs into meaningful digital values, analyzing time-varying signals and using PWM as analog output. These concepts are conveyed using potentiometers, LEDs, speakers, photoresistors and buttons. The text was written by Andy Lindsay of Parallax.

*Board of Education Full Kit **(#28103)** is required to use this Stamps in Class text.*

Part No.	Description	Price
32PX28155	Parts and Text	$48.50

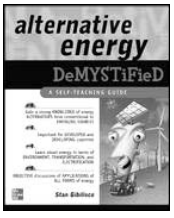
AUDIO DEMYSTIFIED



The fast and easy way to learn audio-frequency electronics. This new addition to the Demystified series offers practical, easy-to-understand information on the latest audio-frequency (AF) electronics technologies. You will learn basic electronics and mathematical concepts, followed by details on speakers, microphones, amplifiers, and equalizers. Specialized topics include computer recording, home and car audio system installation, amplifier design, and live sound reinforcement.

Part No. 310071469834 • Price: $19.95

ALTERNATIVE ENERGY DEMYSTIFIED

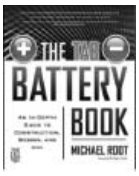


The cost and supply of energy has a tremendous impact on current events, geopolitics, and our lives in general. This book provides a concise look at all forms of energy, including fossil fuels, electric, solar, biodiesel, nuclear, hydroelectric, wind and renewable fuel cells. Readers will get explanations, definitions and analysis of each alternative energy source from a technological point of view. Will appeal to engineering and science students, teachers and anyone with energy related interests. Covers the environment, transportation, efficiency and cost. 384 pages, paperback.

Part No. 31M0071475540 • Price $19.95

THE TAB BATTERY BOOK

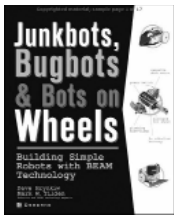
AN IN-DEPTH GUIDE TO CONSTRUCTION, DESIGN, AND USE



Ideal for hobbyists and engineers alike, The TAB Battery Book: An In-Depth Guide to Construction Design and Use offers comprehensive coverage of these portable energy powerhouses. This practical guide discusses battery chemistry and engineering, how batteries are used, and the history of batteries. You'll find out how different types of batteries work and how to select the right battery for any application.

Part # 31M0071739904 • Price: $40.00

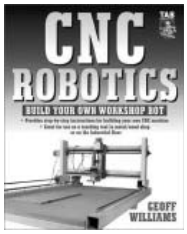
JUNKBOTS, BUGBOTS AND BOTS ON WHEELS



A do-it-yourself guide to BEAM (Biology, Electronics, Aesthetics, Mechanics) robots. They are cheap, simple, and can be built by beginners in just a few hours with the help of this expert guide. Complete with full color photos.

Part No. 31M0072226013 • Price: $24.95

CNC ROBOTICS



Illustrated directions for designing, constructing and testing a fully functional CNC robot that saves you 80 percent off the price of an off-the-shelf bot. Can be customized to suit your exact purposes.

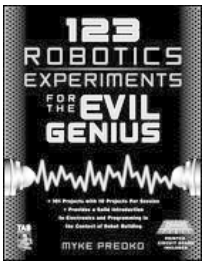
Part No. 31M0071418288 • Price: $36.50

HOLOGRAPHY PROJECTS FOR THE EVIL GENIUS

This wickedly inventive guide explores the art and science of holography and shows you how to create your own intriguing holograms using inexpensive materials. Holography Projects for the Evil Genius explains the tools and techniques you need to know to represent three dimensions on a flat, two-dimensional plane. Using easy-to-find components and equipment, this do-it-yourself book presents a wide variety of holography projects--including science fair ideas--that are guaranteed to impress.

Part # 31M007624007 • Price: $24.95

123 ROBOTIC EXPERIMENTS FOR THE EVIL GENIUS

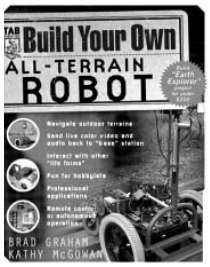


If you enjoy tinkering in your workshop and have a fascination for robotics, you'll have hours of fun working through the 123 experiments found in this innovative project book.

More than just an enjoyable way to spend time, these exciting experiments also provide a solid grounding in robotics, electronics, and programming. Each experiment builds on the skills acquired in those before it so you develop a hands-on nuts-and-bolts understanding of robotics – from the ground up.

Part No. 31M0071413588 • Price: $24.95

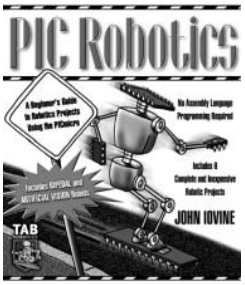
BUILD YOUR OWN ALL-TERRAIN ROBOT



Build your own Mars Rover!! A tough robot that travels where you can't (even in total darkness), sees what lies hidden from your eyes, reports back instantaneously with live color video and audio and can even converse with the carbon-based life forms it encounters. Plans, illustrations and instructions to build a talented, versatile and rugged off-road robot with a range of over a mile.

Part No. 31M007143741X • Price: $29.95

PIC ROBOTICS



Shows both electronics amateurs and professionals how to use the versatile 8-bit PIC microprocessor family to build sophisticated robots.

Features include: artificial vision system that uses a CCD camera to track and follow brightly colored objects, bipedal robots that walk upright, functional robotic arm, easily programmable behavior-based robots, complete parts lists for all projects and step-by-step directions for several complete projects and ideas for hundreds more. Build robots that use a CCD camera, walk on two legs, walk on six legs, obey verbal commands and look for and track bright light sources.

Part No. 310071373241 • Price: $20.95

ALTurbine

The ALTurbine (Adaptable Learning Turbine) is designed for wind energy experiments for classrooms and science projects. Build this turbine to test motors, gears, and blade designs. Test your power output with LED and incandescent bulbs, a mini water pump, and more.

Full Kit Includes

- Wood Tower & Base
- Parts to build ALTurbine Head w/Hub, Driveshaft & Gears
- (5) 18" Balsa Wood Sheets
- (5) 16" Coroplast Sheets
- (1) Digital Multimeter
- (2) DC Generators
- (25) 1/4" Dowels
- (1) Additional Driveshafts
- LED/Incandescent Light Bulbs
- Turbine Test Prop
- Ultra Capacitor
- Low Voltage Water Pump w/ Graduated Cylinder
- Sandpaper
- Curricular materials
- Assembly instructions

Parts Only Kit
The ALTurbine parts only kit is like the full kit. It comes with the materials you need to do a wind energy experiment, but it does not include blade material or electrical devices to attach to the turbine.

Part No.	Description	Price
32KW100	Full Kit	$125.00
32KW105	Parts Only	59.00

COMPREHENSIVE WIND KIT

FULL KIT

With this package students can explore wind turbines, wind energy resources around their school, and the characteristics of wind as it moves around the earth.

- (1) ALTurbine Full Kit, including Weightlifter pack
- Geared Turbine Full Kit, NO water pump/cylinder set included
- (1) Basic Turbine Kit, NO multimeter included
- (1) Mini Turbine Full Kit
- (1) Green Science Windmill Generator
- (1) ALT Gears and Motor Mount Pack
- (3) 12 Hole Crimpiing Hubs
- (25) 1/4" Dowels
- (1) Visual Voltmeter
- (10) Balsa Sheets
- (10) Coroplast Sheets
- (1) water pump only

Part No. 32KW200 • Price: $610.00

WIND CHARGE PLUS

This high power Wind turbine can be used for recharging practically anything. Examples: NiMH batteries, Fuel Cells, Mobile Phones

All accessories shown in the picture are sold separately in the accessory section.

Part No. 32PTWCP366 • Price: $74.95

MINI KID WIND TURBINE

FULL KIT

KidWind MINI 2.0 allows for experimenting with variable wind speeds, powering low load electrical devices, and effectively demonstrating how wind power works. With the included sound and light board users can illustrate power output by playing music and lighting additional LEDs.

The blade set that comes with this turbine has been specifically molded for ideal power output giving this turbine some serious voltage. Although a single MINI will not power the water pump on its own, wiring two or more MINI turbines in parallel will give you enough power to pump water. Try adding one MINI at a time to see how it affects the amount of water being pumped!

Part No. 32KW140 • Price: $32.95

BASIC TURBINE

FULL KIT

The Basic Turbine is a great start for teaching about wind energy in the classroom. This is the most affordable and robust wind turbine kit on the market. Design blades and test your power output with a multimeter, LED bulbs, or an ultra capacitor.

Includes:

- All pipe / fittings (or wood) to build turbine
- (1) DC Generator w/Hub
- (25) 1/4" Dowels
- (5) 18" Balsa Wood Sheets
- (5) 16" Coroplast Sheets
- Simple Multimeter
- Small DC Motor w/Propeller
- Ultra Capacitor
- Alligator Clip Cords
- (2) LED Bulbs
- Protractor
- Black Propeller
- Sandpaper
- Curricular Materials
- Assembly Instruction

Part No. 32KW110 • Price: $81.50

SCIENCE FAIR – FULL KIT

This kit includes a variety of materials to help you build your own wind turbine. It is a collection of hard-to-find materials that we use when experimenting. This kit does not include materials to build a tower; that is for the student to figure out! Building and testing your own wind turbine can take many hours. This kit includes a packet of ideas to try.

Part No. 32KW150 • Price: $65.00

velleman FUEL CELL CAR SCIENCE KIT

This Fuel Cell Car Science Kit uses a reversible PEM fuel cell that combines electrolysis and power conversion into one single device. Watch as oxygen and hydrogen gases are formed in two transparent water containers. The car steers independently of the user once in operation: when the car hits a barrier, it will automatically find its way by reversing away 90 degrees. This fun science kit combines cutting-edge science, education and fun for all!

Features
- Recommended age: 14 years and up
- This kit contains:
  - PEM reversible fuel cell module
  - Car chassis & wheels
  - Electric motor
  - Flashing LED lights
  - Water vessels
  - Gas collectors
  - Connector cables
  - Syringe
  - Battery pack for 2x 1.5V AA batteries (batteries not incl.)
  - User manual on CD

Part No. 32VKKNS10 • Price: $79.95

velleman H-RACER 2.0 IR & HYDROGEN STATION KIT

This futuristic hydrogen car science kit is an amazing way to demonstrate the use of cutting-edge alternative energy and automotive technologies. Its partly transparent body displays the inner mechanics of the car. The car's assembly instructions make it easy and fun to build, and also provides interesting education on real-world challenges.

- Recommended age: 12 years and up
- This kit contains:
  - H-racer chassis & body
  - Fuel cell system components
  - Hydrogen refuelling station (2 x 1.5V AA, LR6C, not incl.)
  - Solar panel & connectors
  - Infrared remote control (3 x LR44, not incl.)
  - Assembly & operation manual

Part No. 32VKKNS11 • Price: $139.95

SAVONIUS BASIC WIND TURBINE

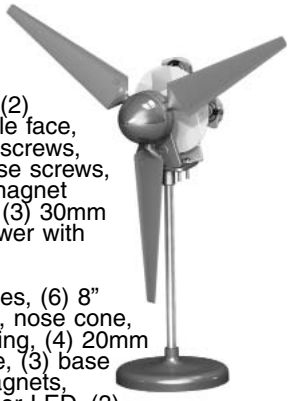
8 inch tall Wind turbine. Build your own magnetic induction generator using magnets and coils which are included. Produces 0.5V ~ 5.0V @ 0.15mA.

Includes: Turbine base, top frame, (4) grade 5 magnets, (4) insulated coils, plastic disc, 8" center dowel, (2) 7.5" side dowels, (2) S-frame, (2) blade cups, (2) stabilizers, bi-color LED, tape, sand paper. Increase power by using optional neodymium/rare earth magnets.

Intermediate and Advanced versions of this kit also available.

Part No. 32PWV3 • Price: $49.95

SKYZ WIND EDUCATION KIT



26 inch tall wind turbine. Produces 1.5V ~ 7V @ 150mA. Create a magnetic induction generator using included coils and magnets.

Basic Model: Includes (3) 8" blades, (2) 3-blade hubs, shaft, nose cone, nacelle face, nacelle base, coil housing, (4) 20mm screws, tower, tower base, metal base, (3) base screws, (2) stabilizers, (4) grade 5 magnets, magnet disc, (4) insulated coils, bi-color LED, (3) 30mm screws, tape, sandpaper. Increase power with option rare earth magnets.

Limitless Model: Includes (6) 6" blades, (6) 8" blades, (6) 10" blades, (2) hubs, shaft, nose cone, nacelle face, nacelle base, coild housing, (4) 20mm screws, tower, tower base, metal base, (3) base screws, (2) stabilizers, (4) grade 5 magnets, magnet disc, (4) insulated coils, bi-color LED, (3) 30mm screws, tape and sandpaper. Increase power by using optional rare earth magnets.

Part No.	Description	Price
32PWH1	Basic Model	$79.99
32PWH3	Limitless Model	109.95

velleman SOLAR ENERGY EXPERIMENT KIT

Solar Edukit: Fun solar powered projects. Learn all about solar energy.

Features
- Part of our EDUKIT range
- Clear instructions
- 10 exciting projects
- With micro controller
- HQ breadboard
- No soldering required!
- Projects include: solar led, solar attention grabber, solar cricket, solar battery charger, solar musical instrument, IR remote tester, solar garden light, solar motion detector, solar alarm simulator, ...

Specifications
- breadboard dimensions: 80 x 60mm / 3.15" x 2.36"

Part No. 32VKEDU02 • Price: $24.95

BASIC SOLDERING KIT

ECONOMY MODEL, COMPLETE WITH TOOLS, INSTRUCTIONS AND PROJECT KIT

A one-stop-shop for everything needed to learn or improve fundamental soldering skills. Save by getting large volume pricing on all the individual items contained in this all in one convenient package.

Product Features:
- Temperature controllable solder station
- Safety goggles
- Mini long nose pliers
- Diagonal cutter
- 4-piece solder aid kit
- 7-in-one hand tool stripper/cutter/crimper
- Solder sucker
- Fun lights solder practice kit
- Soldering techniques pamphlet
- Resistor and capacitor color code guide
- Solder tube (lead free)
- Helping hand with lens
- Packed in convenient cardboard box

Part No.	Description	Price
32BASSLDR	Basic Soldering Kit	$36.95

ENERGY CONSUMPTION METER

KILL A WATT™

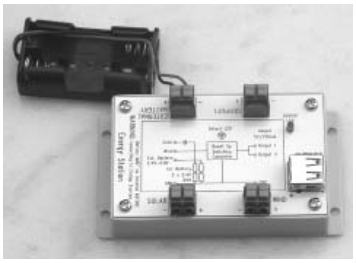
This allows you to measure energy consumption of appliances simply. Simply connect these appliances to the Kill A Watt™, and it will assess how efficient they really are. Large LCD display will count consumption by the Killowatt-hour, same as your local utility. You can calculate your electrical expenses by the day, week, month, even an entire year. Also check the quality of your power by monitoring Voltage, Line Frequency, and Power Factor.

- Large LCD display
- Cumulative Killowatt-Hour Monitor
- Forecast Your Costs
- Also display Volts, Amps, Watts, Hz, VA
- 0.2% Accuracy

Part No. 01P4400 • Price: $28.95

ENERGY STATION

BATTERY CHARGER / REGULATOR KIT



The Energy Station was designed to work in conjunction with most miniature wind turbines and solar panels. It allows you to charge batteries and power external devices. The regulated output voltage is 5V at 250mA. The optimum input voltage range is 1.8V to 3.6V with a maximum input of 4.5V. Note: Input voltages higher than 4.5V will damage the internal boost up regulator.

Technical Information:
- Input Source 1: Wind Turbine Terminal
- Input Source 2: Solar Panel Terminal
- Battery Terminal: For External Battery Connection
- Battery Compartment: 2 x AAA Battery
- Output Terminal: 5V / 250mA

Product Highlights:
- Battery charger
- Regulator for converting external low voltage/amperage sources into useable external energy
- Output of 5V/250mA
- Ideal for regulating 1.8V to 3.6V sources

Part No. 32PTES1 • Price $42.95

ELECTRONICS COMPONENTS HOBBY PAK

Plastic container with flexible dividers. Contains 690 components:

- Resistors (73 values); 365 pcs.
- Capacitors (Disc, Mylar, and Electrolytics from 2.2 ρf to1,000 μf)
- LEDs (20 Different kinds)
- LED Displays (4)
- Photocells (2)
- Digital ICs (2 ea) 74LS - 7 diff. values
- Linear ICs (2 ea) 555, 741, 386
- Regulators (2 ea) 7805, 7812, LM317-T
- Transistors (2 ea) 2N3904, 2N3906, PN2222, 2N3055
- Diodes (2 ea) 1N4007, 1N4148, 1N4728, 1N4733, 1N4739, 1N4744
- Bridge Recitifiers (2) RS406
- Inductors (1 ea) 10μh, 33μh, 47μh, 100μh,1mh, 10mh, 33mh,100mh
- Hookup wire spools (2)
- Alligator Lead Set
- Relays (5V & 12V)
- Microphone, Speaker and Buzzer
- 9V battery snap
- Trim Pots (1K, 10K, 50K, 100K, 1M)
- Switches (2 ea) push button, SPST slide, DPDT slide, 8 pos DIP
- Resistor Guide and Capacitor Guide
- Wire Cutter Stripper (060220)
- DC Motor (3V, 9V)
- Prototype Board (0302PB10) and Breadboard (03MB102)

Part No. 32ECHPK1 • Price: $65.95

MAGNETISM AND ELECTRICITY EDUCATION LEARNING KIT

Learn about magnetism and electricity. Includes a manual with various experiments. Includes magnet, iron filings, magnet wire, DC motors, Galvanometer.

Part No. 3200MEX • Price: $27.95

OWIKIT™

SOLAR SYSTEM

Young astronomers will delight in OWI's newest Mini Solar Kit – as they build, paint and watch their very own Solar System come to life with real solar energy. Planets orbit around the solar-paneled "sun" that drives a motor so the planets actually move. This excellent educational solar kit provides a hands-on lesson about how solar power drives a motor. The kit comes with 6 colors of opaque acrylic paint, plus brush—which makes for the perfect exercise in science and creativity.

Part No. 32OWIMSK679 • Price: $18.90

5-IN-1 ELECTRICITY EXPERIMENTS

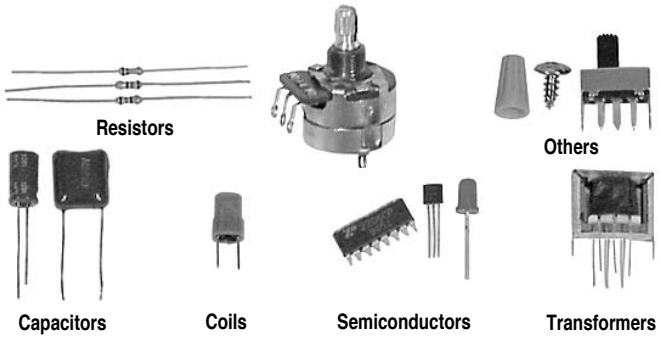
Five different experiments:

- Morse Code
- Electricity Sound
- Rain Detector
- Burglar Alarm
- Flash Light

Has especially designed case to store all components.

Part No. 32SM232 • Price: $6.95

LEARN ELECTRONIC COMPONENTS



28 page manual with dozens of illustrations includes detailed description of all parts, their function in a circuit, color codes and five self tests. Over 50 parts with the course!

Part No. 3200ECK10 • Price: $9.95

SOLAR -LAB-1.0

9 ELECTRICITY LEARNING KIT LABS

This newly designed solar education kit has been created to teach students of all ages, solar cell and electrical circuitry concepts. It contains 9 step by step labs that walk users through easy to understand experiments. Each lesson teaches everything young learners will need to gain introductorily knowledge on solar cells as they integrate them into various circuits.

Product Highlights:

- Step by step manuals for using solar cells to power electronic devices
- Includes a solar powered battery charger (batteries included)
- Includes a 7-function multimeter for circuitry testing and experimentation Includes high quality solar cells

Part No. 32PTSL1ELK • Price $53.95

THE SOLAR STOVETOP COOKER PATTERN

This set of patterns and templates allow you to make a real solar cooker capable of reaching over 600 degrees F. in a matter of minutes! A great renewable energy project. Impress people at your next BBQ with broiled solar burgers! A practical device if you lose power too. The kit includes templates to use for cutting all parts, step by step instructions, and recipes for use with the cooker. Adult supervision is needed when cooking, because the temperature is about the same as the "medium" setting on a real stove, enough to cook meat, fish, and vegetables.

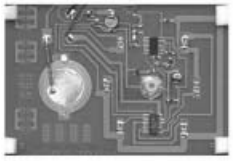
Part No. 32PTSSCP • Price: $15.95

RSR COMPLETE SOLDER STARTER KIT

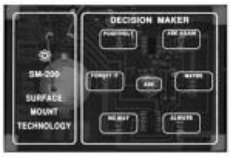
Perfect for beginning solder class. Individually packaged. Includes solder, soldering iron, solder stand and sponge, diagonal cutter, plus two solder project kits.

Part No.	1-9	10+
32RSRSTART	$18.95	$17.95

SURFACE MOUNT SOLDERING PRACTICE KIT



PC board showing practice areas & mounted components



SM-200K in its final assembly as a decision maker

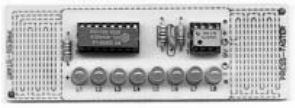
This kit / course provides all parts and instructions to give you experience on working with surface mount components. The finished project is a decision maker with 6 flashing LEDs.

Part No. 3200SM200K • Price: $16.50

RSR FUN LIGHTS

ALSO AVAILABLE IN SURFACE MOUNT VERSION

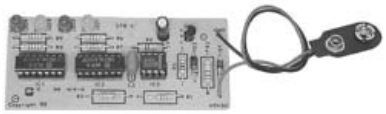
Lights move left to right one at a time or in groups. Insert 9V battery to turn Fun Lights on. Movement speed can also be easily controlled. (*Battery not included)*



Part No.	Description	Price
3200FUN LIGHT	Regular Kit	$4.95
3200SMTFUN	Surface Mount Version	5.95

RSR SOLDER PRACTICE KIT

Learn all about soldering techniques while building this project. Uses a 9V battery (not included).



Part No. 3200SPB2 • Price: $3.95

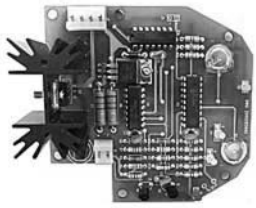
SOLDERING PROJECT KIT

Good soldering requires practice and an understanding of soldering principles. This kit will help you achieve good soldering techniques, make you familiar with various electronic components and provide you with dynamic results. Requires one 9V battery *(not included).*

Part No. 3200SP1A • Price: $7.50

DE-SOLDERING / SOLDERING "REWORK" TRAINING KIT

ECONOMICAL, FLEXIBLE TRAINING CONCEPT

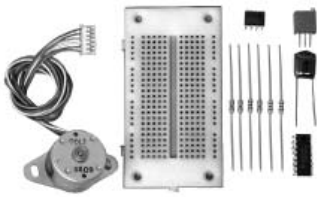


Unique, inexpensive method of teaching de-soldering **and** soldering. Kit is designed around an assembled, power controller interface circuit board that is fully populated with components like Hitachi quad comparators and quad op amps. Approximately 50 components and hardware items, all being DIP (through hole) style. Other semis include, but are not limited to an 8-bit PIC Micro-C and some IRLZ34 N-channel Enhancement Mode Logic Level TrenchMOS transistors. In addition, there are resistors, caps, some unique style red, green and even bi-polar LED's, switches, a buzzer, connectors, heatsink and more. Kit includes circuit board with case, instruction manual, de-soldering pump, 5 ft. desolder braid, soldering iron, 10 gm. solder, iron stand and sponge. After removing parts, "Re-Work" the board by soldering them back! Instruction manual includes technical tips on both de-soldering and soldering.

- Cost-effective method of teaching both de-soldering ***and*** soldering
- Work with an actual finished product (not a hobby) circuit board
- Beginner students can de-solder (and re-work) one section of the board at a time
- Tutorial manual with de-soldering and soldering tips
- Approximately 50 components/hardware on board, additional boards available
- Inherent components parts value
- Contains circuit board, de-solder pump, de-solder braid, soldering iron, solder stand and sponge and solder (10gm), tutorial manual
- Additional boards available

Part No.	Description	Price
32REWORK	Desolder/Solder Training Kit	$12.95
ACCESSORIES		
32STTH757	Extra Board for REWORK Kit	5.10
060821	Extra Tip for De-Solder Pump	0.85
060370	Optional Safety Goggles	1.90
060800	Extra 5' Desolder Braid	0.95
060848	Electric Desoldering Tool	28.50
060702	1 lb. Solder Roll	15.90
060830	4 Piece solder Aid Kit	2.95
060836	Helping Hand and Magnifier Set	3.95

STEPPER MOTOR TRAINING KIT

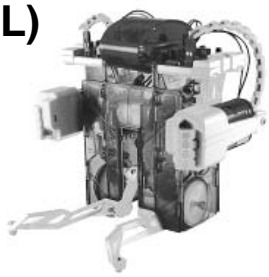


Kit consists of a breadboard, uni-polar stepper motor, driver IC and various components to conduct experiments with stepper motor.

Part No. 32STPKIT • Price: $11.95

FOOTBALL (BOTBALL) ROBOT KIT

NON-SOLDER VERSION



The Botball Robot Football Kit is a remote controlled infrared wireless robot. Its microprocessor technology provided 4 different channels to have up to 4 Football Robots play together in your own arena. There are three motors, two for forward, backward, right left movement and one to kick the ball. Football Robot runs smoothly on 2 wheels.

- Clear illustrated directions
- No soldering required
- Tools needed: Long nose pliers, diagonal cutter, screwdriver
- Batteries not included

Part No. 3221533N • Price: $24.95

TITAN TANK ROBOT KIT

NO SOLDERING REQUIRED

MODEL 21531N

Titan Tank Robot Kit is a wireless infrared remote control kit. Multi channel remote provides 4 different channels to have up to 4 Titan Tanks fight each other at the same time. Each Titan Tank Robot Kit fires 8 shots and is designed to make a sound when shooting. Once a Titan Tank is struck 4 times by an enemy tank, it will turn 360 degrees and make a sound like an ambulance. The Titan Tank then needs to be reset to play again. Six wheel drive allows the Titan Tank to move and turn smoothly.

- Clear illustrated directions
- Tools required: Long nose pliers, diagonal cutter, screwdriver
- Batteries not included.

Part No. 3221531N• Price: $29.95

SPEECH RECOGNITION KIT

Soldering project, complete with all components parts, circuit boards, keypad, headphones and mike. User "trains" the circuit with words or vocal utterances intended for the circuit to recognize. Allows experimentation with many facets of speech recognition technology. Self contained, stand alone unit. User programmable vocabulary (20 to 40 word), multilingual, non volatile memory back up. May be interfaced to control external circuits and appliances

OPTIONAL INTERFACE KITS *(Requires Soldering)*

Model SRI-02 – Ten relays switched corresponding to first ten recognized words by the Speech Recognition Circuit. Enables Speech Recognition Circuit to activate or deactivate 10 electrical circuits or devices.

Model SRI-03 – For more advanced user. Ten logic outputs corresponding to first ten recognized words. Each output provides a +5V signal when word is recognized. Activates or deactivates 10 circuits or devices using TTL logic.

Part No.	Description	Price
32SRI02	Opt. Relay Interface Kit	115.00
32SRI03	Optional Interface Kit	79.00

MATRIX INDUSTRIAL ELECTRONIC CONTROLLER

MODEL MIAC-01

This can be used to control a wide range of electronic systems. Operates off 12V or 24V. It has 8 analog or digital inputs, 4 high current relay outputs and 4 motor outputs. 4 line LCD display and control keys.

- Programmable from PC using USB port
- Easy to program with flow charts, C or Assembly code
- Free copy of Flowcode (for flow charts)
- LabView and Visual Basic compatible

Part No. 01MIAC01 • Price: $209.40

SPACE NINE ROBOT KIT

Space Nine is an eight-legged star explorer. You can control its moves and turns by a remote controlled infrared transmitter. Unlike most other robots, Space Nine can walk on rough surfaces, turn left, and right and even cross rocks.

SPECIFICATIONS:

- **Robot Power:** 4-AAA batteries *(not included)*
- **Transmitter:** 4-AA batteries *(not included)*
- Includes motor, gearbox and all parts
- Easy to follow detailed instructions
- Solder and non-solder versions
- Requires basic hand tools: Long nose pliers, diagonal cutter and screwdriver

Part No.	Description	Price
3221532N	Non-solder Version	$28.95

velleman 3D PRINTER KIT

PRINT 3D INDUSTRIAL DESIGN AND ENGINEERING PROJECTS (MAC, WIN OR LINUX)
THIS ADVANCED KIT REQUIRES MECHANICAL, ELECTRONICS AND COMPUTER SKILLS

It's a build it yourself 3D printer kit to print objects of maximum 20 x 20 x 20 cm using PLA or ABS filament (3 mm plastic wire). It is an extremely fast, reliable and precise printer even when printing at higher speeds. The K8200 is compatible with all free RepRap software and firmware. It is made out of aluminum and easy to assemble leaving room for modifications. The print bed is heated.

Specifications
- Linear ball bearings: 8 and 10 mm (0.314" and 0.393")
- Technology: FFF (Fused Filament Fabrication) for PLA and ABS
- Power supply: 12 V / 3 A max.
- FTDI USB 2.0 to Serial
- Dimensions of printable area: 20 x 20 x 20cm / 7.87 x 7.87 x 7.87"
- Typical printing speed: 120 mm/s
- Maximum print speed: 150 to 300 mm/s
- Extrusion nozzle: 0.5 mm
- Extrusion thermistor: NTC 100K
- Extruded aluminum profiles: 27.5 mm / 1.08" wide
- Movement: 4 NEMA 17 stepper motors

Nominal mechanical resolution:
- X and Y: 0.015 mm / 590.55 in (smallest step the printing plate can move in the X and Y direction)
- Z: 0.781 m / 30.74 in(smallest step the printing plate can move in the Z direction)

Nominal printing resolution:
- Wall thickness (X,Y): 0.5 mm / 0.019"
- Layer thickness (Z): 0.20 - 0.25 mm / 0.0078 - 0.0098"

Dimensions:
- Width: 50cm / 19.7"
- Depth: 42cm / 16.5"
- Height: 62cm / 24.4"
- Weight: 9Kg / 19.84lbs

Software/Hardware:
Repetier 3D Printer driver version 0.84 and up www.repetier.com. Open source hard and firmware are based on the GNU open source communities of RepRap and Sanguinololu. (See http://RepRap.org)
The printer requires a computer to print (MAC, WIN or LINUX) and an internet connection to use the online manual and building instructions.

Part No.	Description	Price
32VKK8200	3D Printer Kit	$795.00
3D PRINT MATERIAL		
32VKPLA3P1	3mm PLA Filament - Pink - 1kg	39.00
32VKPLA3R1	3mm PLA Filament - Red - 1kg	39.00
32VKPLA3Y1	3mm PLA Filament - Yellow - 1kg	39.00
32VKPLA3G1	3mm PLA Filament - Green - 1kg	39.00
32VKPLA3B1	3mm PLA Filament - Black - 1kg	39.00
32VKPLA3N1	3mm PLA Filament - Natural - 1kg	39.00
32VKPLA3O1	3mm PLA Filament - Orange - 1kg	39.00
32VKPLA3W1	3mm PLA Filament - White - 1kg	39.00
32VKPLA3U1	3mm PLA Filament - Blue - 1kg	39.00

FLASHFORGE 3D PRINTER, DUAL EXTRUDER WITH 2 SPOOLS

Package contains: Unit, 2 spool holders, 2 spools of filament (IKGea), 2 filament guide tubes, Feet, bolts and Hex Wrench Kit, Power Supply Cable, USB Cable.

This is a high quality, dual extruder, 3D printer.

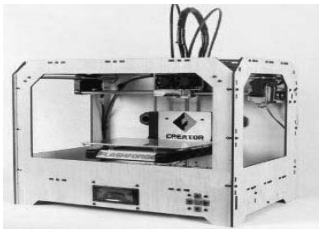


FIGURE A

FIGURE B

Technical Specifications
- 5 axis, 1/16 micro-stepping motor control
- 4x20 LCD Character display and multi-direction control pad
- Universal Power Supply: 100-240V, 50/60 Hz

Software: Replicator G
- Compatibility: Linux, OSX & Windows
- Print from SD card or over USB
- Input file type; STL, gcode, x3g

Printing
- Build envelope: 225 x 145 x 150 mm
- Build volume: About 5 liters
- Layer thickness: 0.1-0.3 mm (adjustable)
- Nozzle diameter: 0.4 mm
- Speed: 40-15 mm/s(adjustable)
- Flow Rate: Approximately 24 cc/hr

Model Creator (Fig A) - Use ABS filament (1.75 mm), Wood frame

Model Creator X (Fig B) - Uses ABS or PLA filament (1.75 mm) metal frame, high temp. resistant, aluminum plate, LED light & corner settings to secure Y transmission

Part No.	Fig	Description	Price
01FF3D1	A	Model with 2 ABS spools	$1195.00
01FF3D2	B	Model with 1 ABS spools/1PLA spool	$1195.00
01FFABS01		ABS spool 1 Kg (1.75mm) - yellow	34.99
01FFABS02		ABS spool 1 Kg (1.75mm) - black	34.99
01FFABS03		ABS spool 1 Kg (1.75mm) - green	34.99
01FFABS04		ABS spool 1 Kg (1.75mm) - white	34.99
01FFPLA01		PLA spool 1 Kg (1.75mm) - yellow	34.99
01FFPLA02		PLA spool 1 Kg (1.75mm) - black	34.99
01FFPLA03		PLA spool 1 Kg (1.75mm) - green	34.99
01FFPLA04		PLA spool 1 KG (1.75mm) - blue	34.99

OWIKIT™ 14-IN-1 EDUCATIONAL SOLAR ROBOT KIT

The solar powered robot can be transformed into 14 different robot modes which include a multitude of comical and functional movements. The user can easily change from a wagging-tail dog -> running beetle -> walking crab -> surfer -> speedster -> zombie chaser… The robot kit provides unique accessories (included) and parts that make the robot move on land and water.

With alternative energy playing such a pivotal role, there is no better time than now to start children on the path to learning basic concepts behind these technologies. Fortunately, this product is powered by the sun, so there are no batteries required. The robot moves in the direct sunlight and allows children to create and use their infinite imagination.

There are two levels in building the robot kit. Level one includes: Turtle-bot, Beetle-bot, Quadru-bot, Boat-bot, Walker-bot, Dog-bot, and Wheel-bot. After they amuse themselves with the entry level, can challenge their manipulative skills with second level: Roly Poly-bot, Auto-bot, Slither-bot, Surf-bot, Zombie-bot, Crab-bot, and Row-bot. Additional features includes: adjustable polarity on the solar panel to change direction of motor rotation, retractable robot head which can be quickly stored in the upper body, the robot head can be installed in the front, top or rear of the gearbox, and a transparent housing to see the movements of the gears.

As the saying goes, “Our children are the future.”And if anything is certain about that future, it is that renewable energy sources and green technologies will play a major role in our children’s lives. With 14 in 1 Educational Solar Robot Kit, let them learn about their future and have fun doing it with.

Part No. 32OWIMSK615 • Price: $28.95

OWIKIT™ RECHARGEABLE SOLAR TRANSFORMERS 7-IN-1

Features all snap together plastic parts (no screws, tools required), solar panel and accessories. It is incredibly easy to assemble the 7 different modules: 2 power charging stations and 5 different vehicles. The transforming rechargeable station has 2 output plugs; one for solar recharging and the other for battery recharging. Amazingly, the battery charging station can bring the selected unit to full power in about 5 seconds and the solar recharging station will fully recharge in approximately 120 seconds. The fun time - run time is approximately 50-80 seconds.

Part No. 32OWIMSK640 • Price: $28.95

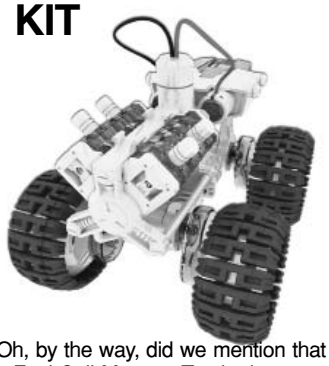
OWIKIT™ SALT WATER FUEL CELL ARACHNOID KIT

Building on the success of OWI’s award winning Salt Water Fuel Cell Car, the second generation appears to be just as dynamic... maybe a little frightening. After activating the fuel cell module with a saltwater mixture, the magnesium metal sheet (3 sheets included) can operate the Spider for about 5-7 continuosly.

The Salt Water Fuel Cell Giant Arachnoid Kit gives children a change to learn about new forms of clean energy, while building and powering their very own toy: feed it saltwater and watch it scurry away!

Part No. 32OWIMSK751 • Price: $15.95

OWIKIT™ SALT WATER FUEL CELL MONSTER TRUCK KIT



The Salt Water Fuel Cell Monster Truck Kit is equipped with four-wheel drive mechanical construction. It easily handles different types of terrain by its twisted car body design. The transparent case design allows children to see the rhythm of the piston in vertical or horizontal position. Each monster wheel can change its angle individually and the truck can change its height and shape. Forward and reverse...no problem; simply switch the "positive and negative" connectors. Oh, by the way, did we mention that it is fueled by salt water? The Salt Water Fuel Cell Monster Truck gives children a chance to learn about new forms of clean energy, while building and powering their very own kit: just add saltwater and roar!

Part No. 32OWIMSK752 • Price: $22.95

OWIKIT™ SOLAR SPACE FLEET

Some solar powered toys, particularly those children can build themselves; provide an ideal mix of creative, active learning. The Solar Space Fleet, for example, allows children to snap together parts (no tools required) to create seven different working models including a Space Station, Robot, Rover, Vehicle, Astronaut, Shuttle, and Dog. Each complete model is powered by a mini solar panel using sunlight, indoor halogen light, or micro rechargeable battery that literally brings the kits to life. As children watch the toy they built move around and speed up or slow down depending on the intensity of the light, they’re not only learning and experimenting with solar power but also having fun with it.

Part No. 32OWIMSK641 • Price: $25.95

ELECTRONIC ROBOT KITS

ROBOT – MR. TIDY

Advanced robot kit, uses an Atmega 1280 processor and Arduino compatible. This small robot is capable of locating and picking up cans, cups or bottles and sorting them by size, weight.

here are four of my IR obstacle detectors, one on each corner that will be angled downward to detect cliffs as well as walls. The IR sensors share a common analog input so switching the IR LEDs one at a time is required to read individual corners. These outputs also drive 4 normal LEDs for visible detection of opperation. When the outputs change to inputs, 4 micro switches used for monitoring the arm / gripper position can be read. These switches will only monitor the limits of travel for the arm / gripper.

The gripper is fitted with an RGB LED and an LDR to form a colour sensing "Amander LDR". By reading the LDR when different colours are lit the robot can determine the colour of the object being picked up. This sensor will be angled downward to read the colour of the floor as well.

A conductive foam pressure sensor is used to determine how hard the robot is gripping an object.

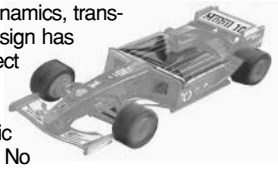
Recharging will occur when the robot reaches a docking station.

Part No. 3200MRTIDY • Price: $180.00

OWIKIT™ SONIC F1

JR. SCIENCE SERIES

The perfect balance of aerodynamics, transmission, speed, and stylish design has made Sonic F1 the top prospect in the racing community. When equipped with the most powerful engine, the sun, Sonic F1 races at amazing speeds. No batteries required and 8 plastic parts to assemble.



SPECIFICATIONS:
Solar Panel Output: 1.1V x 50mA
Assembled Size: 110mm x 45mm x 30mm
Tool needed: Diagonal Cutter

Part No. 32OWIMSK674 • Price: $11.95

OWIKIT™ ATTACKING INCH WORM

JR. SCIENCE SERIES

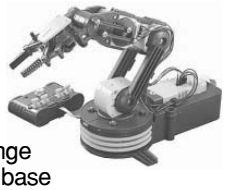
The sun's rays power this mini solar kit to slither along to safety. The mechanical movements simulate the movements of its soft-bodied derivative. No batteries required and forty-eight parts to assemble.

SPECIFICATIONS:
Solar Panel Output: 1.1V x 75mA
Assembled Size: 165mm x 44.4mm x 49mm;
Tool Needed: screw driver [(+) size m2-3]

Part No. 32OWIMSK673 • Price: $10.50

OWIKIT™ ROBOTIC ARM EDGE

NO SOLDERING REQUIRED



Riding the wings of the award winning Robotic Arm Trainer, OWI has made robotic arm technology more affordable without compromising quality. With Robotic Arm Edge, command the gripper to open and close, wrist motion of 120 degrees, an extensive elbow range of 300 degrees, base rotation of 270 degrees, base motion of 180 degrees, vertical reach of 380mm, horizontal reach of 320 mm, and lifting capacity of 100g. WOW! Some of the added features include a search light design on the gripper and a safety gear audible indicator is included on all five gear boxes to prevent any potential injury or gear breakage during operation. How does this equate to fun? Total command and visual manipulation using the 5s: five switch wired controller, five motors, and five joints. Night time play is possible and extended life on the gearbox to prolong your control and predictions of the robot's behavior.

Specifications: Battery: 'D' size battery x 4; Dimension: 9" L x 6.3" W x 15" H; Weight: 658g

USB INTERFACE (PART NO. 32OWI535-USB)

Now robot lovers can connect the Robotic Arm Edge to a PC and have real time manual control of the robotic arm and program the arm to perform a sequence of movements – just like an actual robot on an assembly line. The USB Interface Kit comes complete with a CD, printed circuit board, USB cable and accessories, and a detailed instruction manual.

ACTIVITIES AND EXPERIMENTS CURRICULUM (PART NO. 32OWIEXP535)

This CD curriculum provides multiple step-by-step activities and experiments for the Robotic Arm Edge robot in both manual and computer control modes. Students are challenged to measure and record robot specifications, perform experiments, solve problems, record data, reflect about their activities and answer questions in each robot lab activity. Using the site license that comes with the product, directions may be read off a computer screen or made into printed masters and copies. This curriculum when combined with the Robotic Arm Edge creates numerous and flexible educational opportunities for students. Answer keys provided. This is a flexible robotics curriculum for individual student use, home schools, science museums, and schools. CD is Mac and PC compatible.

SPEECH INTERFACE KIT OPTION (PART NO. 32RS07)

Available in kit version *(soldering required for this option*), the speech interface kit works in conjunction with the speech recognition, which is also a soldering project. Both kits are needed if you wish to have speech recognition capabilities with the Robotic Arm. Using these kits with the Arm permits experimentation with speech recognition and control technology. Train the speech recognition circuit with words you want to use to control the Robotic Arm. While the Speech Recognition kit can function as a stand alone unit, if you wish to have speech recognition capabilities with the Robotic Arm, both the speech recognition kit and the speech interface kit are necessary.

Part No.	Description	Price
32OWI535	Robotic Arm Edge – No Soldering Required	$49.95
32OWI535-USB	Arm Edge PC Interface – USB (Assembled)	30.95
32OWIEXP535	Arm Edge Activities Curriculum CD	20.95
32SRI01	Speech Interface Kit ***(Requires Soldering and the Speech Recognition Kit #32SR07)***	75.00
32SR07	Speech Recognition Kit ***(Requires Soldering and the Speech Interface Kit #32SRI01)***	95.00

OWIKIT™ SOLAR BULLET TRAIN

All Aboard the fastest train under the sun! OWI is proud to introduce their Solar Bullet Train mini solar kit. This kit entices students and train enthusiasts alike to learn about the environmental benefits of renewable energy. Two interlocking cars attach to the engine, allowing young builders to focus on self-motivation, perseverance and manipulation. The Solar Bullet Train is an excellent beginner building kit designed to teach how solar power is used to drive a small motor. Its 18 parts snap together and are secured with only four screws. Train enthusiasts of all ages will enjoy building this amazingly fast eco-friendly train and watch it travel without rails.

Part No. 32OWIMSK680 • Price: $12.50

OWIKIT™ SOLAR SYSTEM

Young astronomers will delight in OWI's newest Mini Solar Kit – as they build, paint and watch their very own Solar System come to life with real solar energy. Planets orbit around the solar-paneled "sun" that drives a motor so the planets actually move. This excellent educational solar kit provides a hands-on lesson about how solar power drives a motor. The kit comes with 6 colors of opaque acrylic paint, plus brush—which makes for the perfect exercise in science and creativity.

Part No. 32OWIMSK679 • Price: $18.90

OWIKIT™ ALUMINUM BUG KITS

Mega Mantis

Samurai Scorpion

Rhino Beetle

Almost lifelike, these aluminum building kits feature interesting bugs that you assemble from metal and bendable aluminum parts. Each kit contains approximately 25 hard and soft pre-punched aluminum parts, a few screws, nuts, springs and assembly tools. Easy to follow instructions with detailed graphic illustrations. For ages 10 and up.

Part No.	Description	Price
32OWI351	Mega Mantis	$9.95
32OWI352	Samurai Scorpion	9.95
32OWI353	Rhino Beetle	9.95

OWIKIT™ 6-IN-1 EDUCATIONAL SOLAR KIT

Mini Solar building kits teach children the benefits of solar energy while they create a toy that is both fun to play with and requires no batteries. Newest member of this popular line is the 6 in 1 Educational Solar Kit, an excellent beginner building kit designed to teach how solar power is used to drive a small motor. Children use the 21 snap together parts (no tools required) to build six different working models including an airboat, windmill, puppy, and two different planes.

Part No. 32OWIMSK610 • Price: $18.95

OWIKIT™ 3-IN-1 SOLAR STALLION

Pegasus

Horse Trainer

Chariot

Triple your fun in the sun with 3- in-1 Solar Stallion. This solar-powered kit helps kids understand the benefits of renewable energy while creating their own fun, battery-free toy. It's exciting to watch solar energy make the product come to life, and this hand-on approach to science and building creates a tangible lesson in solar energy for girls and boys alike.
Young horse lovers will especially enjoy assembling and re-assembling these easy-to-build equine choices: 'Horse Trainer', 'Pegasus', or 'Chariot'.

Part No. 32OWIMSK613 • Price: $18.95

OWIKIT™ PEPPY ORANGUTAN

Amaze and surprise your friends with its animal-like animation. No batteries required and 15 plastic parts to assemble. Clear easy to follow instructions. Peppy Orangutan can motivate students to learn about micro-robotics and solar energy.

SPECIFICATIONS:
Solar Panel Output: 1.1V x 75mA
Assembled Size: 80mm x 55mm x 40mm
Tools needed: Screwdriver, Diagonal Cutter

Part No. 32OWIMSK675 • Price: $11.95

TRONIX LABS (1, 2, & 3)

- **Cool experiments and lessons**
- **Kits complete with books and parts**
- **Classroom friendly, no soldering required**

TRONIX 1 LAB – Fundamental Concepts "Electronics for Robotics" Lab

40 great experiments to learn basic electronics fundamentals quickly. Well written and perfectly illustrated manual for hands-on labs. Build over 40 really interesting experiments and circuits. Teaches how various components function, such as resistors, pots, photocells, caps, speakers, semiconductors, etc. Just of few of the experimental circuits include burgler alarm, variable speed lights, police siren, moisture detector, morse code oscillator, insanity alarm game, electronic organ and more. Basic electronics lessons include Ohm's Law, Resistors in Series and Parallel, Voltage Measurement and more. Complete with everything needed including battery and manual.

Part No.	Description	Price
32TRONIXLAB1	Tronix 1 Lab complete kit Fundamental Concepts Electronics for Robotics Lab	$28.25

TRONIX 2 LAB – Basic Digital Concepts and Op Amps Lab

39 lessons and hands-on experiments to introduce digital electronics to students, technicians and robotics enthusiasts. Each experiment is complete with a lesson showing drawings and diagrams explaining the concepts of digital electronics. Covers CMOS and linear Op Amp IC's, gates, flip-flops, schmitt triggers, shift registers and more. Circuits to build and experiments include Logic, Counters, Digital Read-Outs, Chaser Lights, Light Activated Counter and more. Complete with everything needed including battery and manual.

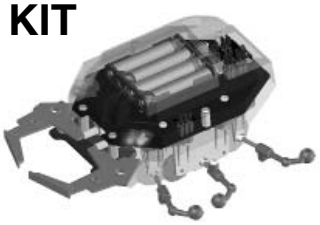
Part No.	Description	Price
32TRONIXLAB2	Tronix 2 Lab complete kit Basic Digital Concepts and Op Amps Lab	$44.95

TRONIX 3 LAB – Basic Electronics Oscillators and Amplifiers Lab

95 page illustrated manual instructs hands-on-style exactly how basic electronics oscillators and ampliers work. Create all kinds of sound and light displays. Covers Transistors as Amplifiers, Audio Amplifying Systems, Transistors in Oscillators and Oscillator Applications. Even includes Vacuum Tube theory. Question and Answer section in each lesson. Complete with everything needed including battery and manual.

Part No.	Description	Price
32TRONIXLAB3	Tronix 3 Lab complete kit Basic Electronics Oscillators and Amplifiers Lab	$39.95

SCARAB ROBOT KIT

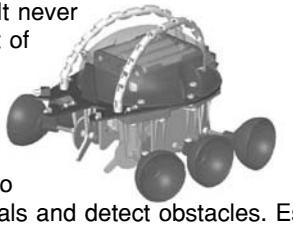


Interchangeable Legs

Scarab is a robot that makes use of two touch sensors to detect obstacles. When its antennae (touch sensor) detect an object in its path, Scarab will go backward first and automatically follow a two-step maneuver to help it overcome the obstacle, which can be a combintion of "Left Turn", "Right Turn", "Reverse", "Stop". The Scarab Robot can be configured with different sets of movements. The kit comes complete with 2 sets of differently designed legs, which provide endless fun and excitement with its different sets of movements. **Power Source:** Four 1.5V "AAA" Batteries *(not included).*

Part No. 3221884 • Price $19.90

ESCAPE ROBOT KIT

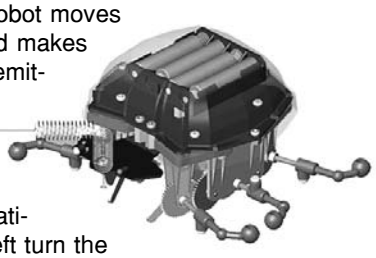


Interchangeable Legs

The Escape Robot Kit works just like an A.I. robot. It never fails to find its way out of a maze. The Escape Robot makes use of three infrared emitting diodes and one infrared receiving module to send and receive signals and detect obstacles. Escape Robot has a built-in microprocessor which enables it to "think" on its own, as it processes information about its environment and maneuvers itself around obstacles. Escape Robot moves on six legs. The kit comes complete with 2 sets of differently designed legs, which provides endless fun and excitement with different sets of movements. **Power Source:** Four 1.5V "AAA" batteries *(not included).*

Part No. 3221886 • Price: $19.90

LADYBUG ROBOT KIT



Interchangeable Legs

The Ladybug Robot moves with six legs and makes use of infrared emitting diodes as its "eyes" to avoid obstacles along its path. Ladybug automatically makes a left turn the moment it detects an object in its path. It continues to move forward after that if there is no shadow in front of the sensor. The design of the Ladybug, which is based on two sets of legs, enables it to perform different sets of movements. **Power Source:** Four 1.5V "AAA" batteries *(not included).*

Part No. 3221885 • Price: $17.90

HYPER PEPPY OWL KIT

Pre-soldered PCB

Explore the fundamentals of robotics with this informative and entertaining robot kit. Appropriate for ages 10 and up, Hyper Peppy is an intelligent robot with a touch/sound sensor. If it comes in contact with an object or hears a loud noise (such as hands clapping), Hyper Peppy automatically reverses, then turns left before embarking on a new course.

- Requiring only basic hand tools,
- Complete step-by-step instructions,
- Pre-assembled printed circuit board,
- Condenser microphone
- Easy-to-assemble mechanical drive system.

Part No. 32OWI969 • Price $27.95

OWIKIT™ TRIPLE ACTION SOLAR CAR

Features an aerodynamic sports car shell design with a transparent car body that can be painted or left clear to view the inner mechanics, 4 wheel chassis, powerful 1.4 volt – 350 milliampere solar cell, and a multispeed transmission. Parts are removable to create other projects. Two way battery source for solar or battery power.

- Solar battery
- Power Source: 1 "AA" battery (*not included)*

Part No. 32OWI685 • Price $46.95

OWIKIT™ BINARY PLAYER ROBOT

Binary Player Robot is controlled by black and white patterns on a disk, which are read by an infrared sensor. Particular patterns activate either of two wheels to turn left, right, forward, or pause. These on/off commands illustrate the basic principles of binary coding. To change a movement program, the operator simply creates a new disk pattern. Set your course and explore the fascinating world of Binary Player Robot! Dr. OWIKIT says this is an excellent Beginner Series robot. This battery-controlled kit can teach the basic principles of robotic sensing and locomotion. It features a pre-assembled printed circuit board, hardware, and mechanical drive system that can be handled by almost anyone from age 10 and up. Only basic hand tools are required for assembly. An infrared sensor and printed circuit board controls your programmable friend. Binary Player Robot is more than just fun. Assembling, building, and following instructions help develop fine motor skills and hand-eye coordination

Part No. 32OWI9875 • Price: $38.95

OWIKIT™ JUNGLE ROBOT

No Soldering Required. A condenser microphone and printed circuit board controls your multi-function (walking or climbing) friend. When you think Jungle Robot is asleep, just cry "Wake UP!" Your robot will immediately start climbing or walking for a pre-set time and reset itself waiting for another command. Excellent Beginner series robot. Can teach the basic principles of robotic sensing and locomotion. Features a pre-assembled printed circuit board, hardware, and mechanical drive system that can be handled by almost anyone from age 10 and up. Only basic hand tools are required for assembly.

Part No. 32OWI9870 • Price: $29.95

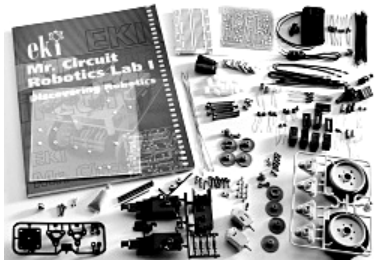
OWIKIT™ SUMO ROBOT

Bring the Sumo tradition to your home. This super warrior, SUMO ROBOT can be controlled to assail and overpower its opponent or retreat to prepare for battle. An infrared sensor beam is emitted when detecting an opponent. Upon detection, it instructs the brain of SUMO to "charge", thereby creating a bonafide wrestling match! You be the referee (gyoji) and decide who the grand champion (yokozuna) will be. Get two and let the SUMO ROBOT wrestling match begin. No soldering required.

Part No. 32OWI9647 • Price: $49.95

MR. CIRCUIT ROBOTICS

Utilizes the same principles and teaching techniques found in the earlier versions of the popular Mr. Circuit series of electronics training courses. Highly user-friendly for both teachers and students. Easily begin your first robotics class even without prior robotics experience. Includes a book, solderless breadboard and re-usable components. The curriculum teaches how robots actually move, turn, stop, etc. Includes infrared and sound sensors, IC's and other components commonly used to build robots. Offers a step-by-step teaching process. Hands-on, easy to teach, affordable and reusable from year to year. The advantage of this product is that it not only has the student building, but teaches how robots actually work. Package comes complete as illustrated.



Part No. 32EKIMROBOTICS • Price: $95.00

3-IN-1 ALL TERRAIN ROBOT

The 3-in-1 All Terrain Robot is a multi-function tracked mobile robotic kit. Utilize different track modules and make your robot transform into 3 amazing variations: the forklift, rover, and gripper. Using the wired controller, command the robot to move forward, backward, turn, grip and lift.

In forklift mode, the ATR is like a mini industrial fork lift, with the ability to lift up to 100 g in weight. In rover mode, the ATR's tank-like treads can traverse any type of surface. And in gripper mode, the ATR's strong arms grab and lift anything up to 100g, allowing you to move it to your desired location.

This kit allows students to create and recreate: Put it together, take it apart, make another module…It's all about flexibility, and intelligent thinking. But luckily, kids don't have to be robotics engineers to create and achieve. With the 3-in-1 All Terrain Robot, they learn as they play.
Requires 4xAA Batteries (not included)

Part No. 32OWI536 • Price $51.95

ROBOT KIT – MR. GENERAL

- Mr. General is a general purpose robot platform designed to allow students to easily build their first robot. The bread board provides a solder free method of connecting almost any processor to Mr. General's sensors and servos.
- Using 2 servos modified for continuous rotation, speed and direction of both wheels can be controlled using only 2 digital outputs.

  The 4 infrared sensors on the base can be used as analog or digital inputs for either edge detection or obstacle avoidance.
- Four indicator LEDs are wired in parallel with the IR LEDs and can be individually controlled.

  The pan / tilt universal sensor bracket is driven by two miniature servos allowing additional sensors / devices to be aimed by the processor using only 2 digital outputs.

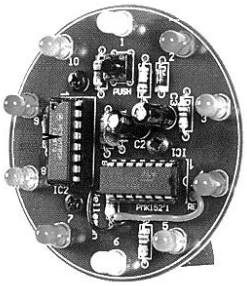
  The infrared compound eye can be mounted on the pan/tilt assembly allowing the robot to track moving objects or detect obstacles up to 200mm away.

  Voltage rails can be isolated and connected to different voltages allowing the use of 3.3V and 5V devices together
- With the IR LEDS and sensors, two or more Mr. General can talk to eack other, which will allow us to organize a robot football match.

Part No.	Description	Price
3200MRGEN	Complete Robot Kit	$58.95
3200IRKIT	Infrared Compound Eye	7.95

velleman-kit HIGH-Q

WHEEL OF FORTUNE



10 LED's (red, yellow and green). Push the button to start spinning action. Spinning action gradually decreases. Finally, it stops and one LED remains lit. Auto power-off. Requires 9V battery.

Part No. 32VMK152 • Price $6.75

ROBOT – BABY

No need to solder. It comes assembled and pre-loaded with Arduino boot loader and demo software. It can be programmed via USB cable *(sold separately).* Needs 4 NiCd or NiMh batteries *(not included)* and they can be trickle charged with built-in circuit.

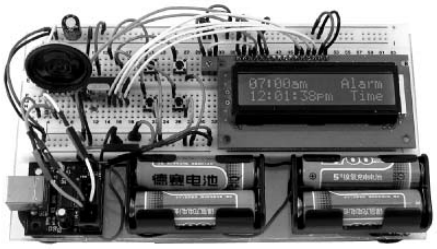
Part No. 3200RBABY • Price: $59.95

ROBOT – BASIC

This is a basic 4WD chasis ideal for small robots. it has an aluminium base, 2 motors/gearboxes and AA x 3 battery holder. The prototype PCB on top is double-sided with plated through holes.

Part No. 3200RBASIC • Price: $28.95

LCD TRAINER KIT

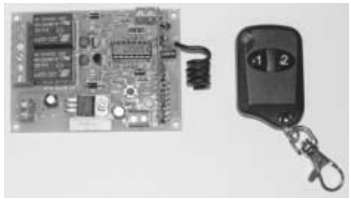


Liquid crystal displays are used in everything from mobile phones and TV's to robots. This trainer kit gives students hands on experience. A high quality instruction manual with step by step colour photos teaches students how to connect a common LCD to a processor and program it using free software from the internet. The basic kit comes with everything required for students to display messages, detect objects and build a working alarm clock.

Part No. 3200LCDTKIT • Price: $58.95

RELAY BOARD - REMOTE RF

2 CHANNEL W/TRANSMITTER

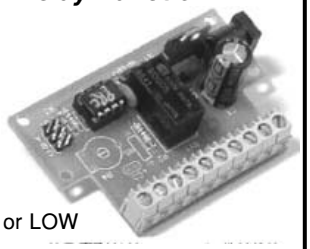


- Two channel RF Remote Control Relay Board
- 2 relays (channels), individually jumper selectable
- Range is over 250 ft
- Receiver power 12 DC (power supply not included)
- Each relay is jumper selectable, latching or momentary
- Relay contact rating 24 VDC @ 10A; 250 VAC @ 10A
- Fully assembled and tested board

Part No. 32HD2COMBO • Price: $29.50

PIC RELAY CONTROLLER

Good Companion For Any Kit That Needs Additional Amperage or A Micro-Controlled Relay Function



Relay functions listed below are preset

- ON/OFF toggle mode
- ON/RESET mode
- Fixed delay .5 second pulse stretch
- Fixed delay 10 second pulse stretch
- Variable time 1.5 to 14 sec.
- Variable time 11 to 24 sec.
- 3 Amp. total output
- Input and reset signal can be Active HI or LOW
- Wall transformer included

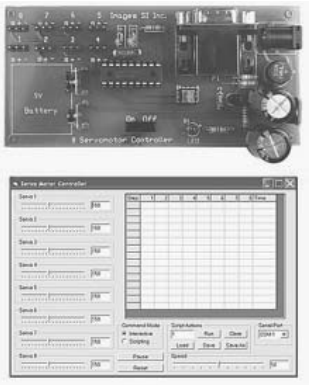
Voltage Requirements: 7.5 to 15VDC

Part No.	Description	Price
32ERPRC1	PIC Relay Controller	$24.75
32ERPRCC	Optional Case	12.75

SERVOMOTOR CONTROLLERS

KITS AND ASSEMBLED VERSIONS

MODEL SMC04 – Four Servomotor Controller
MODEL SMC05 – Five Servomotor Controller
MODEL SMC08 – Eight Servomotor Controller



- Allows control of hobby servomotors (Hitec/Futaba).
- Servomotors may be controlled manually via on-board switches ***(Models SMC04 and SMC05)***, or by a Windows program (CD included, updates available for download)
- PC Control: adjustable servomotor speed control. Each servo controlled by an individual slider.
- Manual control: each servomotor controlled using a three-position switch on the board. ***Models SMC04 and SMC05*** offer both manual and PC control. ***Model SMC08*** features PC Control only.

SMC08

Operates on 9V battery or with AC adapter *(not included)*

Part No.	Description	Price
32SERVO4K	Kit version – 4 servomotor controller	$69.00
32SERVO4A	Assembled version – 4 servomotor controller	115.00
32SERVO5K	Kit version – 5 servomotor controller	79.00
32SERVO5A	Assembled version – 4 servomotor controller	130.00
32SERVO8K	Kit version – 8 servomotor controller	56.00
32SERVO8A	Assembled version – 8 servomotor controller	95.00
16SMC9V	AC adapter for servomotor controllers	12.00

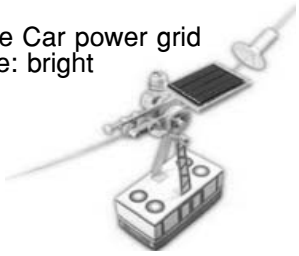
OWIKIT™ FLAPPING SEAGULL

OWI's Flapping Sea Gull mini solar kit creates a kit that looks similar to a sea gull with a life like creation of a three dimensional wing flapping. Requires the warmth of the sun in order to flap it wings. No batteries required and 12 plastic parts to assemble.

SPECIFICATIONS:
Solar Panel Output: 1.1V x 75mA
Assembled Size: 170mm x 80mm x 19mm
Tools Needed: Diagonal Cutter & Scissors

Part No. 32OWIMSK677 • Price: $10.95

OWIKIT™ AERIAL CABLE CAR



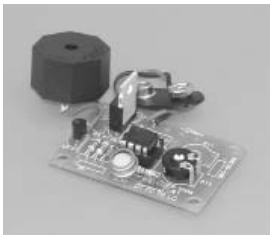
The Aerial Cable Car power grid system is simple: bright sun – "power on", little or no sun – "power off". The unit is quiet and stealth. No batteries required and 30 plastic parts to assemble.

SPECIFICATIONS:
Solar Panel Output: 1.1V x 75mA
Tools needed: Screwdriver, Diagonal Cutter, Scissors.

Part No. 32OWIMSK676 • Price: $13.90

LASER CHALLENGE

GREAT GAME FOR THE LASER POINTER



Set your target across the room. You can set it anywhere up to 25 yards. Hit the bulls-eye and the alarm will sound.

Power Requirement: 9v battery *(not included)*
TWO TARGETS SUPPLIED

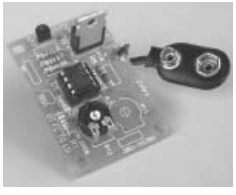
Part No. 32ERLAS1 • Price: $14.75

NIGHT CRICKET

Makes a sound like a cricket. Small enough to hide almost anywhere.
PCB Size: 2.75" x 1.2"

Part No. 32ERNC1 • Price: $14.75

WATER ALARM



Liquid level sensor. When fluid reaches sensor, 100mA output can trigger a relay (not included) which in turn can activate (or turn off) a sump pump.

Wall transformer included

Part No. 32ERWA2 • Price: $17.75

TURNING FROG

SOLDERING

When this robot detects sound, it will move, and repeat following turns in sequence: forward, stop, left turn, stop, right turn, stop. Includes 2 sets (unassembled) gear motors. 2 x AA and a 9V battery *(not included)*.

Part No. 3221882 • Price: $14.50

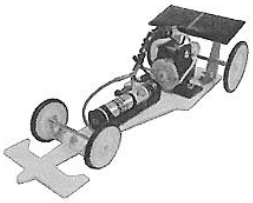
SOLAR POWER RACER

- No soldering required
- Includes all parts / instructions
- Solar operation

Part No.	1-9	10+
32CISOLARACE	$10.95	$9.95

SOLAR FORMULA I

- No soldering required
- Includes all parts / instructions
- Solar or battery operation
- For battery operation needs (1) AAA battery *(not included)*



Part No.	1-9	10+
32CIF1	$11.90	$10.90

SOLAR ROBOT

- No soldering required
- Includes all parts / instructions
- Solar or battery operation
- For battery operation needs ((1) AA battery *(not included)*

Part No.	1-9	10+
32CISOLAROB	$13.00	$12.00

ELECTRIC MOTOR AND GENERATOR KIT

- Safe, solderless, educational
- Easy to read, lab style manual
- Build your own motor / generator

Part No. 32MX902T • Price: $21.95

LINE TRACKING MOUSE

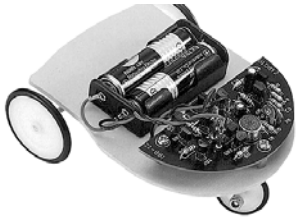
SOLDERING

Smart mouse robot that tracks a black line (use black tape against white background). Create twists and turns for mouse to find its target. Three photo-interrupters helps it find its way. Sound activated, programmed IC, two sets (unassembled) gear motors. 4 x AA batteries *(not included.)*

Part No. 3221880 • Price: $19.50

SOUND SENSOR CAR

SOLDERING

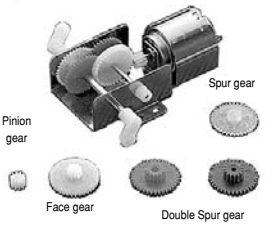


Robot car uses condensor microphone as sensor, and reverses direction whenever it detects noise (hands clapping), or touches an obstacle. 2 x AA batteries (not included).

Part No. 3221881 • Price: $21.90

2-IN-1 GEARBOX KIT

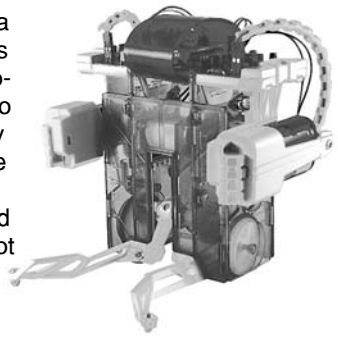
Includes motor, 2 sets gears, metal shafts, gearbox and additional accessories to create different gear ratios, RPM and speed.



Part No. 3221130 • Price: $5.25

FOOTBALL (BOTBALL) ROBOT KIT

NON-SOLDER VERSION

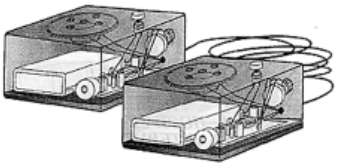


The Botball Robot Football Kit is a remote controlled infrared wireless robot. Its microprocessor technology provided 4 different channels to have up to 4 Football Robots play together in your own arena. There are three motors, two for forward, backward, right left movement and one to kick the ball. Football Robot runs smoothly on 2 wheels.

- Clear illustrated directions
- No soldering required
- Tools needed: Long nose pliers, diagonal cutter, screwdriver
- Batteries not included

Part No. 3221533N • Price: $24.95

2 STATION INTERCOM



- Communicate up to 500' between units
- 2 intercom stations supplied
- Power Requirements: two 9V batteries
- 30' of hookup wire supplied

PCB Size: 1" x 1.75"; **Cabinet Size**: 1.6"H x 2.5"W x 3"D

Part No.	Description	Price
32ERINT2	2 Station Intercom	$29.75
32ERINT2C	Optional Cases (2 Cases)	24.85

AUDIO STEREO AMPLIFIER

Teaches how amplifiers take a small signal and amplify it to drive two small speakers or headphones. This kit provides up to 1 watt of low-distrotion audio power. The Harmonic Distortion is 0.2% and the voltage gain is up to 46dB. Designed around LM386 and LM1458 IC's.

Power Requirement: 5 to 10VDC
Board Size: 2.25" x 2.75"

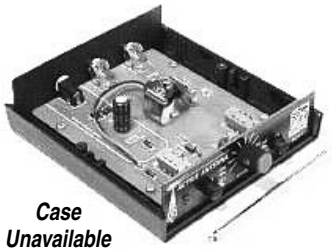
Part No. 32EREBST11 • Price: $12.40

TRAFFIC LIGHT CONTROLLER

For the serious hobbiest, this kit will simulate the operation of a Red, Yellow & Green traffic light. Model Railroad is but one of many applications for this kit. Power requirements 7.5V to 15VDC.

Part No. 32ERSTOP1 • Price: $ 17.90

ACTIVE ANTENNA AMATEUR RADIO KIT



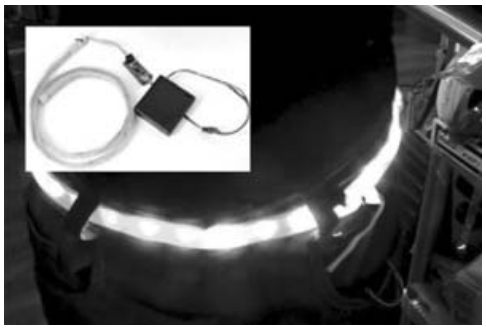
Case Unavailable

- Replace a 60' long wire antenna with this small unit
- Use it on short-wave, HF and VHF
- Great for scanners, ham receivers, or general coverage receivers
- Complete with a telescoping antenna
- Freq. 1 MHz to 100MHz
- Gain control
- Operates on 9v DC or use a 7 to 15v DC wall transformer

Part No.	Description	Price
32ERACA1	Active Antenna	$44.75

adafruit ULTRA BLINKY LED BELT KIT

Digital Programmable, Perfect for parties, raves parades and more...



We designed this project to demonstrate how to use the digital LED strip, how to use our Atmega32u4 breakout board with the Arduino IDE and how to make a portable battery powered project that runs off of AAs. This project is not too difficult, and can be finished in a day. Some soldering experience is good since 'free wire' soldering is a little more difficult than soldering to a PCB, but even beginners should be able to manage. We don't include a tutorial on using the Arduino IDE so its good if you've played around with the Arduino already.

Part No. 32ADDPLED • Price $60.00

velleman 100W SUBWOOFER KIT

Kit contains all necessary parts to build your compact but powerful high quality subwoofer.
(Wooden panels not included!)

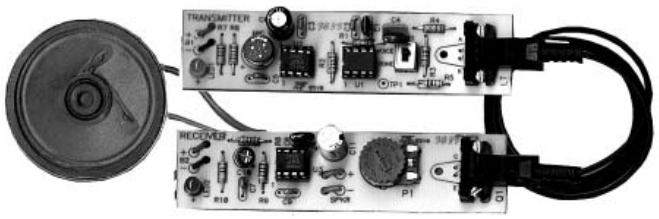
- Bass-reflex system with adjustable tube
- Compact size due to dual-speaker principle
- Adjustable level and filter response
- Auto power-on/off system
- Phase switch (0 -180)
- Line level and speaker level inputs for maximum compatibility
- 'Full-range'-option for use in active speaker system
- Separate chamber for electronics avoids air leaks

SPECIFICATIONS

- **Power output:** 100Wrms/ 4ohm (10% THD)
- Filter freq. response:
- **Wide:** 25 - 110Hz (-6dB)
- **Narrow:** 18 - 65Hz (-6dB)
- **Speakers:** two 6.5" 8 ohm drivers
- Line level input sensitivity: 500mV
- Auto turn-on level: 5mV
- **Volume*:** approx. 20 liter
- **Power supply:** 120/230VAC
- **Dimensions:** 460x310x210mm / 18,22 x 12,28 x 8,32"

Part No. 32VK8077 • Price: $139.95

OPTICAL AUDIO LINK



Easy to assemble voice link. Transmitter and receiver on separate PC boards. Great for learning the basics of fiber optic communications. Includes fiber optic devices, cable and connector. Requires 2 – 9V batteries *(not included)*.

Part No. 3200OK726 • Price $13.90

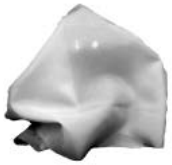
velleman-kit ANIMATED GHOST

MODEL MK166

- Great Halloween gadget
- Greets your visitors
- For shops, parties, events or just for fun

SPECIFICATIONS

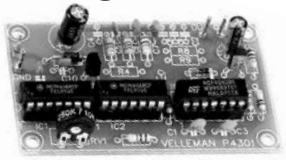
- Ghost responds to sudden noises
- Adjustable sensitivity
- Battery operation: 2xAAA battery
- Dimensions: 137x68x50mm



Part No. 32MK166 • Price: $18.95

velleman-kit PINK NOISE GENERATOR KIT

INTERMEDIATE LEVEL



This generator can be used to analyze the acoustic properties of a room.

- 33-bit shift register
- Pink noise filter: –3dB per octave
- Clock frequency from 30KHz and 100KHz
- Output Voltage: 150mV RMS @ 40KHz

Requires: 12V DC Adapter

Part No. 32VK4301 • Price: $14.95

LINE TRACKING ROBOT

NO SOLDERING

The Line Tracking Robot will follow a black line drawn on white ground by using 2 photo interrupters as its eyes. The two photo interrupters will distinguish black and white by projecting infrared rays. Create different routes with black electrical tape or black marker and see what your line tracing robot can do.

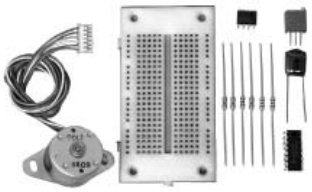
Part No. 3221890 • Price: $15.95

LOGIC PROBE KIT

Monitors digital signals. Simple, but essential piece of test equipment. Tests digital circuits at various points and shows whether that point is high, low or constantly changing. Helps troubleshooting logic gates, timers, clocks, counters, prescalers and other digital circuits. Logic probe is powered by the circuit being tested.

Part No.	Description	Price
32ERLOG	Logic Probe Kit	$9.90
32ERLOGSMD	Surface Mount Version	9.90

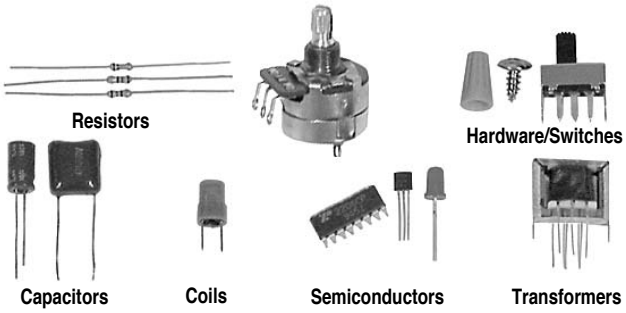
STEPPER MOTOR TRAINING KIT



Kit consists of a breadboard, uni-polar stepper motor, driver IC and various components to conduct experiments with stepper motor.

Part No. 32STPKIT • Price: $11.95

LEARN ELECTRONIC COMPONENTS



28 page manual with dozens of illustrations includes detailed description of all parts, their function in a circuit, color codes and five self tests. Over 50 parts with the course!

Part No. 3200ECK10 • Price: $9.95

GAME TIMER

GOOD EXAMPLE OF HOW A MICROPROCESSOR WORKS

- 10 minute count down
- Three 7-Segment LED displays
- Counts down by seconds
- In the last minute it sounds a short beep every 10 seconds
- The last 10 seconds it will sound a beep every second
- One long beep will sound when time is up

Part No.	Description	Price
32ERGT10	Game Timer	$49.75
32ERGTC	Optional Case	12.75

CUSTOM PART & COMPONENT KITS PACKAGED TO FIT YOUR EXACT NEEDS

YOU ALWAYS HAVE IT YOUR WAY!

CUSTOM PACKAGING • WIDE SELECTION OF QUALITY, BRAND NAME TOOLS • NUMEROUS OPTIONS...INCLUDING RESISTORS, CAPACITORS, SEMI-CONDUCTORS, WIRE TOOLS, TEST LEADS, PROBES, TEST EQUIPMENT AND MUCH MORE!

NO INVENTORY TO MAINTAIN
Kits are shipped pre-packaged.

ELIMINATES INVENTORY INVESTMENT
Your kits arrive just when you need them.

YOU DON'T HANDLE PARTS OR COMPONENTS
Every kit is custom packaged with the exact parts necessary to meet your individual course objectives.

ELIMINATES PARTS PROCUREMENT
You get all the advantages of our centralized purchasing. These saving are automatically passed on to you without the bother or trouble of procurement.

SELECT THE EXACT EQUIPMENT YOU NEED:

CAPACITORS
Ceramic Disc
Mylar
Tantalum
Electrolytic

ELECTRICAL HARDWARE
Wire
Fuses
Jacks
Banana Plugs
Binding Posts
Connectors
Sockets
Breadboards
Test Leads

ELECTRONIC EQUIPMENT
Logic Probes
Power Supplies
Multimeters
Oscilloscopes
Educational Trainers

INTEGRATED CIRCUITS
TTL
CMOS
Linear
Memory
Microprocessor
Peripheral Components

MAGNETIC PRODUCTS
Power Transformers
Audio Transformers
Inductors
Cores

OPTO DEVICES
LEDs
Displays
Bar Graphs
Arrays
Dot Matrix
Fiber Optic Devices

POTENTIOMETERS
Single Turn
Multi Turn
Panel Mount

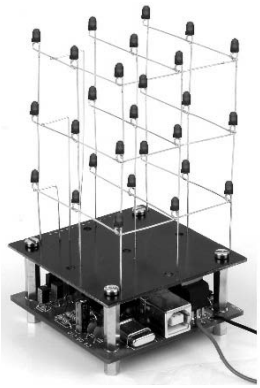
RESISTORS
Carbon Film
Metal Film
Wire Wound
Networks

SEMICONDUCTORS (DISCRETE)
Diodes
Transistors
Diacs
SCRs
Triacs

SWITCHES
Toggle
Slide
Push Button
Rotary
Dip

velleman 3D LED CUBE 3X3X3

MODEL MK193



- LEDs: 3 x 3 x 3 = 27 LEDs (30 LEDs supplied)
- large amount of user programmable frames
- user programmable via USB (creation of animation/scenes)
- colour:
- standard: red version
- Soldering skills required
- Software:
  - Create all the animations you want and share them with others!
  - Divide your animation into multiple scenes
  - Up to 234 animation frames
  - Supports basic geometric operations (shift, rotate...)

Part No. 32VMK193 • Price: $29.95

STORAGE BOXES

Attached Lid Containers (ALCs)

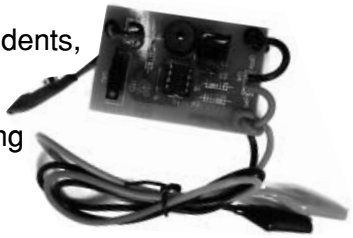
Reusable shipping, distribution and storage containers. ALCs are ideal for use in order picking, closed-loop distribution, and storage applications. ALCs are ideal for use in order picking, closed-loop distribution, and storage applications. Attached lids snap securely closed to protect contents from dust or damage. They stack for maximized storage and nest when empty saving space. Textured bottoms provide a sure grip on conveyor belts. Strong molded-in handle grips are ergonomically designed for easy lifting and carrying. Padlock eye provides security option. Reinforced hinge pins for years of smooth lid operation.

Dimensions: 21-1/2 x 15 x 12-1/2

Part No.	Description	Color	Price
90AM39120GY	Attached Lid Container	Grey	**$27.75**
90AM39120BL	Attached Lid Container	Blue	**$27.75**
90AM39120RD	Attached Lid Container	Red	**$27.75**
90AM39120GN	Attached Lid Container	Green	**$27.75**

RSR CONTUINITY CHECKER

The RSR Continuity Checker is a soldering kit that is compact, lightweight and easily portable.



Electronic technicians, students, and hobbyist can make practical use of this continuity checker in testing points on circuit boards and prototype circuits. A feature of the continuity checker is its audible buzzer that shows when connection is made. The soldering kit contains all component parts and can be assembled by beginner and intermediate level students.

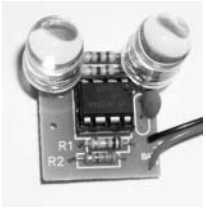
Requires 9V battery (not included).

Board dimensions: 2.31” x 1.25”

Part No. 3200CONCHK • Price: $6.95

HI INTENSITY BLINKY LED KITS

RED, BLUE AND JUMBO VERSIONS



Basic solder project kits. Come with Hi Intensity 5mm LED’s (two per kit), which alternately flash. Perfect for toys, model trains, name tags, auto and many

Other applications that can use bright, flashing lights. PC board is 1” x ”.

Runs on 9V battery (not included), or

6V ~ 15V power source.

Jumbo version - available in Blue or Yellow. Big 10mm LED’s. Jumbo kit comes with (4) cartoon characters designed to fit over the LED’s.

Part No.	Description	Price
32ERRBH3	Hi-Intensity Red Blinky Kit	$4.25
32ERBBH3	Hi-Intensity Blue Blinky Kit	4.25
32ERDJBB3	Hi-Intensity Jumbo Blue Blinky Kit	5.95
32ERDJYB3	Hi-Intensity Jumbo Yellow Blinky Kit	5.95

EDUCATIONAL KITS

CO_2 DRAGSTER KITS

ADULT SUPERVISION REQUIRED

ELECTRONIC RACE SYSTEM NECESSARY FOR OPERATION

Includes all parts needed to design and build a CO_2 dragster.

Each kit contains:

- 12" basswood or balsa body blank pre-drilled for CO_2 cartridge
- Detailed design/process guide book
- 8 gram CO_2 cartridge
- Axles, washers, wheels, screw eyes, sandpaper
- Styrofoam body blank

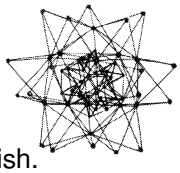
Part No.	Description	Price
32811005	Basswood Body	$5.75
32821007	Balsa Body	6.55

BULK PACKAGE PRICING

Bulk packs contain 50 sets of all parts needed to build 50 dragsters, including CO2 cartridges. Packaged in bulk, not individual kit boxes.

Part No.	Description	Price
32811044	Basswood – 50 Piece Bulk Pack	$220.00
3281015	Balsa – 50 Piece Bulk Pack	235.00
ACCESSORIES AND REPLACEMENT ITEMS		
32831050	Paint Stand – allows dragsters to be painted without touching them	9.95
32B721019	CO2 Cartridges 8 Gram	0.63

IKOSO KITS



These simple tools make it easy for anybody to design beautiful, satisfying structures. You can start by modeling the five perfect solids, known as the Platonic Solids, or design anything you wish. By constructing 3D shapes with these wood and plastic parts, students will learn about form they see every day in art and engineering. Once completed, the kits can be taken apart and used again.

Part No.	Description	Price
32B711028	Stars and Crystals	$4.00
32B711030	Large Spheres – Glow In the Dark	9.35
32B711031	Black Mobile	8.20

BRIDGE BUILDING KIT

Popular problem solving student activity. Kit contains your choice of either balsa or basswood sticks (325 pieces 1/8" x 1/8" x 24"), graph paper, instructions and 24 1-oz. bottles of colored wood glue. Enough materials for 24 bridges.

Part No.	Description	Price
32831003	Basswood Bridge Pack	$90.50
32831004	Balsa Bridge Pack	110.90

MECHANICAL MOTORIZED WOODEN KITS

NO SOLDERING

Fig. 1

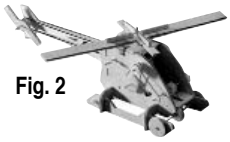


Fig. 2

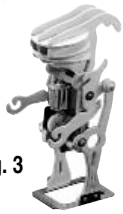


Fig. 3

Fig. 4

Fig. 5

This series of mechanical, motorized kits teaches students how to build up a gearbox, the basic operation of automotive transmissions and how gear and pulley drive motors work.

- Supplied with pre-punched boards, pulleys, gears, shafts, switch, motor, battery holder and all necessary parts. Powered by 2 or 4 AA batteries *(not included.)*
- Easy to follow instructions.
- Tools required: Knife, screwdriver, long nose pliers.

Part No.	Description	Fig.	Price
3221602	Stegosaurus (Gear Drive)	1	$10.95
3221604	Copter (Pulley Drive)	2	10.95
3221603	Robot (Gear Drive)	3	10.95
3221601	Tyrannosaurus (Gear Drive)	4	10.95
3221605	Race Car (Pulley Drive)	5	10.95

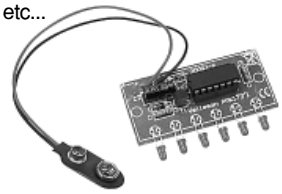
STATUE OF LIBERTY

- Easy Interlocking design
- Crafted from balsa wood, precut into punch-out pieces that snap together
- Assembled Size: 9" x 9" x 32"

Part No. 32SM032 • Price: $14.95

velleman MINI-6-LED CHASER

- 1 LED scans from side to side
- As attention grabber in stores, at exibitions, etc...
- As seen in classic TV series...
- Applications:
  - — Toys
  - — Scale and RC models
  - — As gadget
  - — For stage, plays, movies, etc...
- 6 high-intensity 3mm red leds



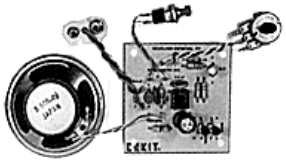
SPECIFICATIONS

- Power supply *(required)*: 4-15VDC (20mA at 12VDC)
- Fixed scan speed (side to side): 0.5s
- Dimensions: 55 x 25 x 10mm / 2.18 x 0.99 x 0.39"

Part No. 32VKMK173 • Price: $12.95

SPACE REVOLVER

When you push the button on this kit, it generates an electric rapid fire effect. The firing frequency can be adjusted by use of a potentiometer. An LED also blinks with the pulses of sound.



Principles Taught: 555 oscillator, sound modulation

Part No. 32EKI2108 • Price: $11.20

AUDIO AMP / SIGNAL TRACER

This kit will amplify an audio signal to 0.3 W. Use for boosting preamplified signals, sirens, or as a signal tracer for repairing radios and audio amplifiers. **Principles Taught:** Audio, operational amplifiers

Part No. 32EKI2114 • Price: $8.70

DIGITAL LOCKS

2051: A system for opening garage doors, solenoid locks, or to prevent unauthorized use of electronic equipment.

2052*: For a high-tech alarm system for home or car. You can choose the combination and select which key arms the alarm.

Part No.	Description	Price
32EKI2051	Digital Entry Lock	$28.20
32EKI2052*	Combo Lock/Alarm Control	23.95

****FREE SOFTWARE:** Free Kit Prep™ software – one disc per type of kit with purchase of the **Combo Lock / Alarm Control (2052)** Kit.*

LED PENDULUM METRONOME

Uses the sequential lighting of ten LEDs set in an arc to form the swinging arm. A speaker produces the rhythmic clicking sound of the metronome.

Part No. 32EKI2009 • Price: $28.20

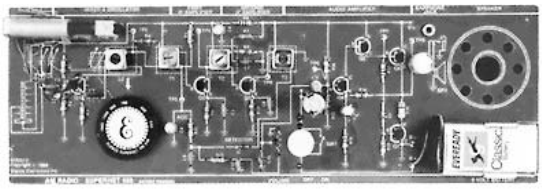
MOTOR SPEED CONTROL/ LIGHT DIMMER

Vary the speed of a hand drill or other small "brush" type motor. Makes an excellent light dimmer.

Part No. 32EKI2062 • Price: $9.95

AmeriKit™ AM RADIO KIT

MODEL AM-550

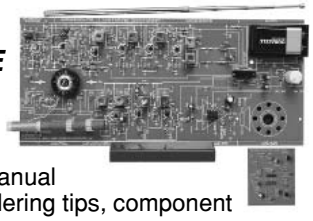


10 1/2" x 3 1/2" PC board, 28-page manual divided into 54 sections; RF, 1F, oscillator, detector and audio circuits.

Part No.	Description	Price
32AMR	With Trans Amp	$18.95

AmeriKit™ AM/FM SUPERHET RADIO KIT

MODEL AM/FM108CK CONTAINS TWO SEPARATE AUDIO SYSTEMS: IC & TRANSISTOR



- Advanced kit, requires soldering
- 63 page educational instruction manual complete with quiz questions, soldering tips, component identification, conversion charts
- Coverage includes but not limited to: alignment, static and dynamic measurement,
- Bandwidth tests conveniently features two separate audio sections to accommodate instructors who prefer either IC or transistor design

Part No.	Description	Price
32AMFM108CK	with IC & Transistor	$26.95

DIGITAL CLOCK KIT

Has many special features

- 12 or 24 hour mode
- Buttons for slow and fast reset
- Can be used as count down timer
- Can be used as a stop watch

Part No.	Description	Price
3200DCLKIT	Clock-Kit Version	$15.75
3200DCLASM	Clock-Pre-Assembled	17.95

TELEPHONE LINE ANALYZER

A telephone analyzer that provides fast indication of telephone line polarity, ring and line voltage levels, condition of the telephone line from user's telephone to central telephone office. Also can check basic telephone functions and condition of telephone line.

Part No. 32TLA (Kit) • Price: $21.95

FOLLOW ME

SOUND DETECTING ROBOT KIT

NO SOLDERING

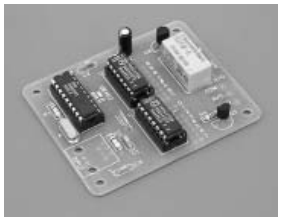
A very interesting sound detecting robot kit. The robot has a sound sensor that enables the robot to respond to clpas in any direction. Turn the switch to "ON", the robot eyes start flashing, plays "Do, Re, Mi ..." and turn right and left. The effective distance for the robot to respond is within 1 meter.

- Flash LED
- 4 pieces built-in microphone
- Buzzer
- Master PCB
- Gear motor
- Power source – 1.5V "AAA" x 4 *(not included)*

Part No. 3221887 • Price $20.95

SWEET 16 TONE DECODER

OPERATES THROUGH PHONE LINES, RADIOS OR SCANNERS

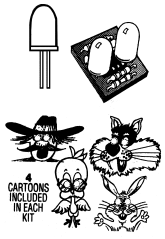


The Sweet 16 Tone Decoder detects (DTMR) "Dual Tone Multi-frequency" data (those sounds you hear when pushing buttons on your phone), and *when each individual button is pressed* it sends a unique voltage to the electronics on the printed circuit board which activates a circuit on or off. There are 16 different touch tones, 12 of which are on a normal phone; special key pads have 4 additional buttons (A, B, C, D). This decoder gives an output voltage for all 16 touch tones. The Sweet 16 Tone Decoder has on the printed circuit board one (1) relay and driver circuit. If you want to use all 16 you can build your own board with 16 relays and driver circuits on it, or to get fancier, use a flip-flop IC to achieve a "toggle" effect (push ON, push OFF), or a 555-timer to provide a timing effect (on for 5 minutes, then off — the choices are unlimited. Any one output may be connected to the onboard relay circuit. Size: 2.2" x 2.8".

Part No. 32ERTT16 • Price: $34.75

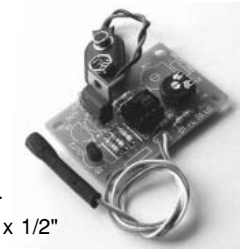
JUMBO CARTOON LED KITS

Large dome (10 mm) jumbo LEDs alternate flashing. Kit comes with 4 cartoons designed to slip easily over the LEDs. **Size**: .75" x 1" x 1". **Power Requirement**: 9-12VDC (*not included*).



Part No.	Description	Price
32ERDJRD-2	Red	$5.90
32ERDJGB-2	Green	5.90

FAN CONTROLLER



Use this kit to control cooling fans, or any device that is temperature activated. Output is 100mA. For a 3 Amp application use the Relay Power Kit (Part No. 31ERRP1) or the Micro-controlled PIC Relay Controller Kit (Part No. 32ERPRC1). Temperature probe included.

Operating Voltage: 7.5 to 18VDC; **Size:** 1.5" x 1/2"

Part No. 32ERFC1 • Price: $14.75

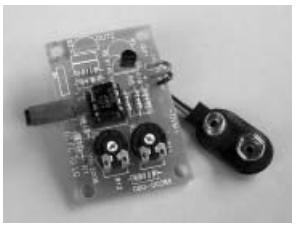
ROBOT CHASSIS

MAGICIAN

This kit comes with 2 geared motors, 2 wheels, 1 omni wheel, 1 battery holder and several screws and spacers. Both motors will work on voltage from 3V-6V with a maximum stall current of about 1A depending on voltage and internal resistance of the motor driver circuit. The wheel is a standard RC car wheel with a good quality rubber tire.

Part No. 3200MOTCHS • Price: $24.95

DIGITAL THERMOMETER KIT



Sensor is only 1/4" sq. and can be remotely located. Circuit designed to turn your digital multimeter into an accurate thermometer with .1 degree resolution. 250 degree span covering from -.40 to 300 F. Requires a 9V battery.

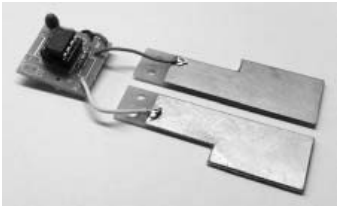
Part No. 31ERDT3 • Price: $8.50

INDUCTANCE METER

Use your volt ohm meter to read those unmarked inductors. Measures chokes from 3 H to 7 mH. Requires a 9-volt battery.

Part No. 31ERIA1 • Price: $14.50

WATER DETECTOR KIT



555 Oscillator circuit drives speaker (included) to sound alarm when water level rises on remote detector board and changes conductivity between two contacts. Operates on 6-12 VDC.

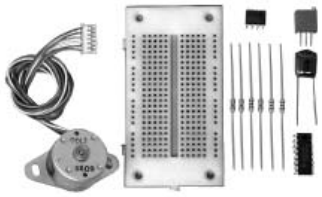
Part No. 31ERWD2 • Price $9.75

CHASER LIGHTS

Use this kit like a theater marquee. Every fourth LED chases around the display to give you a dazzling effect. you can use 40 LEDs around badges, pictures, hats, belts, signs. Only your imagination limits the possibilities. Kit supplied with 16 LEDs. Power requirement 5 to 15 v DC. Size: 1.5" x 1.7"

Part No. 31ERCL1 • Price: $14.95

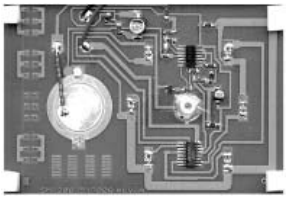
STEPPER MOTOR TRAINING KIT



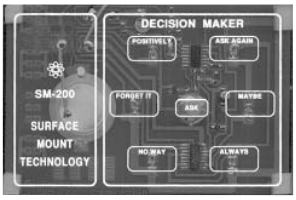
Kit consists of a breadboard, uni-polar stepper motor, driver IC and various components to conduct experiments with stepper motor.

Part No. 32STPKIT • Price: $11.95

SURFACE MOUNT SOLDERING PRACTICE KIT



PC board showing practice areas & mounted components



SM-200K in its final assembly as a decision maker

This kit / course provides all parts and instructions to give you experience on working with surface mount components. The finished project is a decision maker with 6 flashing LEDs.

Part No. 3200SM200K • Price: $16.50

INFRA-RED TRANSDUCER BOARD

Range Sensor Not Incl.

Great for robotics applications. This board is designed to interface with the SHARP GP2D12 analog-output infra-red range sensor. Our board has a comparator and a 10-turn trim-pot to set a specific range. When target comes within range, an open-collector output goes low and an on-board LED lights. Gives more flexibility compared to the fixed-range digital-output version of the SHARP transducer.

Part No.	Description	Price
01INFRDTRKIT	Kit Version	$24.00
01INFRDTRASSM	Assembled	29.00

RESISTOR SUBSTITUTION BOX

RS-500

The RS-500 Resistance Substitution Box is a convenient instrument for determining the desired resistance values in circuits under design or test. The resistance obtainable is from 0 ohm to 11, 111, 110 ohms in 1 ohm steps. All resistors are precision 1% accuracy 1 watt.

Part No. 32RS500 • Price: $24.95

adafruit BATTERY BOOST KIT

Make your own iPod/iPhone/GPS/etc... battery-pack and recharger!
This project includes all the electronic parts necessary to build your own MintyBoost: a small & simple (but very powerful) USB charger for your iPod (or other mp3 player), camera, cell phone, and any other gadget you can plug into a USB port to charge.
The charger circuitry and 2 AA batteries fit into an small space such as an Altoids gum or mint tin, and will run your iPod for hours, 2.5x more than you'd get from a 9V USB charger! You can use rechargeable batteries too.
New In Version 3: Provides 500mA @ 5V, tested and designed to work with all the latest iGadgets including the latest iPhones and iPods, etc., improved efficiency for high-drain devices. Kit comes unassembled and is suitable for beginners. Some soldering tools are necessary but even if you've never soldered before it should be pretty easy. Read more about the project on the Minty Boost webpage
Tested with: iPods, iTouches and iPhones (including the latest 4G), PSP, DS.. iPhone 3gs is the most finicky of the bunch, tinkering may be required. Batteries and tin not included. You can also of course make your own case!

Part No. 32ADBBKIT • Price $19.50

3½ DIGIT LCD THERMOMETER

WITH DUAL TEMPERATURE PROBES

- Indoor/Outdoor temperature (-20 to +199.9)
- Temperature of electronic equipment vs. room temperature.
- Furnace or Air Conditioner efficiency (return air vs. output air)
- Temperature inside car / outside car
- Attic temperature / outside temperature
- Requires 9V battery (*not included)*
- Size: 2 3/4"W x 1 5/8"H x 1"D

Part No. 32ERLCDT1 • Price: $34.75

AMATEUR RADIO

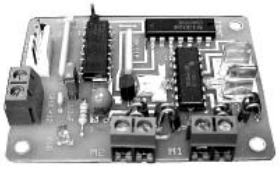
2 METER, 10 METER, 220 MHZ FM COMMUNICATION RECEIVER

Outer Case Optional

We use the new Motorola FM receiver MC3362 IC. The receiver is a dual conversion (10.7MHz tuned IF), with 1 V sensitivity and band width of 5KHz. It has 400mw of output. The only adjustments are easily tuned using one of these items — TV, cable converter, frequency counter, or a service monitor. The kit is varactor tuned with volume and squelch controls. All of the parts are included for each frequency. You choose what frequency to build. Power requirements 9 volt DC.

Part No.	Description	Price
32ERREC2	Communication Receiver	$33.95

DUAL H-BRIDGE BOARD



Ideal for robotics applications.
Allows independent control of two separate DC motors in the range of 8 to 24 Volts at up to 1 Amp of current. Can be pulse-width modulated to control speed. Two optically isolated inputs for each motor: RUN/STOP and FORWARD/REVERSE. Inputs can be made non-isolated via jumper.
Built-in thermal shutdown protection.

Part No. 01DHBRBD • Price: $25.95

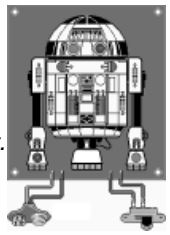
EDUCATIONAL KITS

DIGITAL LED CLOCK

- Clock with red 7-segment displays in an attractive enclosure
- Automatic time base selection (internal or net-frequency controlled 50/60Hz) Internal time base with fine-tuning adjustment
- Internal time base with fine-tuning adjustment
- Select 12h- or 24h-mode for the time display
- Equipped with backup battery (3 x AA) in case of power failure
- Clock still displays the time in case of power failure
- **Power supply:** 9V AC/DC
- **Dimensions:** 3.6 x 1.8 4"

Part No. 32VKMK151 • Price: $35.00

ROBOT BLINKER*



Two super-diffused LEDs pulse for hours. Easy to assemble and fun to use.

**FREE SOFTWARE*: *Free Kit Prep™ software – one disc per type of kit with purchase of above kit.*

Part No. 32EKI2014 • Price: $7.25

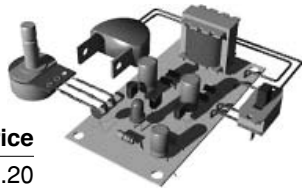
SHOCKER GAME

Is actually two projects in one, both designed to test your ability to remain calm. One circuit will indicate failure by turning on an LED, the other by giving an adjustable shock.

Part No. 32EKI2070 • Price: $11.20

VARIABLE POWER SUPPLIES

0-9 VOLT • 0-15 VOLT • 5-24 VOLT



Just what you need to meet the wide range of power requirements necessary for experimenting, project building and electronics repairs

Part No.	Description	Price
32EKI2028	0-9 Volt	$21.20
32EKI2030	0-15 Volt	$25.20
32EKI2060*	5-24 Volt	$23.20

0-9 Volt

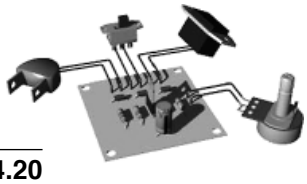
FREE SOFTWARE:* *Free Kit Prep™ software – one disc per type of kit with purchase of the **5-24 Volt Variable Power Supply.*

STROBE STICK

Use as an emergency signal in boats or campers. Plugs into the cigarette lighter.

Part No. 32EKI2046 • Price: $38.95

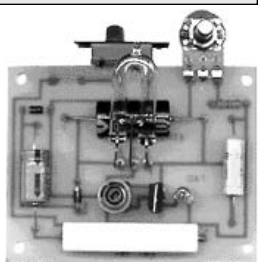
SHIMMER LIGHTS



Makes a string of Christmas lights or a regular light bulb "shimmer." Great as a window display, holiday decoration, or exciting attention-getter

Part No. 32EKI2020 • Price: $14.20

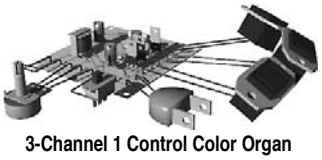
STROBE LIGHT*



The speed or flash rate can be varied from one or two per second to twelve or more per second

Part No. 32EKI2040 • Price: $19.25

COLOR ORGANS



3-Channel 1 Control Color Organ

1-Channel* - It produces a dramatic effect by flashing a light or string of lights to the frequency of music. Plug them in and watch them keep time to the music.
12 Volt - Is ideal for use with 12-volt battery systems. This kit flashes 9 LEDs in three different frequency ranges to the beat of the music. Connect to any 8 ohm speaker output.
3-Channel 1 Control* This kit drives three different strings of light (up to 150 watts each). Each output uses a different frequency range to produce a fascinating light effect. Has main sensitivity control and connects to an 8 ohm speaker output.
3-Channel 4 Control* Connect this kit to any 8 ohm speaker output and run three different strings of blinking lights (up to 150 watts each) for base, middle, and treble ranges. Each channel has its own sensitivity control plus a master control.
Power Blaster* - 4-channel, 5-control-light activated device that can handle up to 1000 watts in input. The color organ uses both sides of the stereo output, mixes them together, and divides the music into four separate frequency ranges. It includes a microphone input. Each channel has its own sensitivity control plus a master control. Operates on 110AC.
Sound Activated - Is similar to all other color organs except for the fact that no electrical connection is made directly to the sound source. You just set the crystal microphone, hear a sound and adjust the sensitivity to get the light effect you want. Plug any light into the socket (up to 150 watts). It has a variety of uses.

Part No.	Description	Price
32EKI2022*	1-Channel	$13.20
32EKI2042	12 Volt	20.20
32EKI2034*	3-Channel 1 Control	17.20
32EKI2036*	3-Channel 4 Control	20.95
32EKI2035*	Power Blaster	25.90
32EKI2084	Sound Activated	17.10

FREE SOFTWARE:* *Free Kit Prep™ software – one disc per type of kit with purchase of the **1-Channel, 3-Channel 1 Control, 3-Channel 4-Control, and Power Blaster Kits.*

CHRISTMAS TREE

Perfect for the holiday season. Use it as a Christmas ornament, in a window, or as a center price on a table

Part No. 32EKI2021 • Price: $11.95

ELECTRONIC TURKEY

A seasonal novelty sure to please Mom. Precut in the shape of a turkey, with flashing rows of LEDs on the tail feathers.

Part No. 32EKI2019 • Price: $12.20

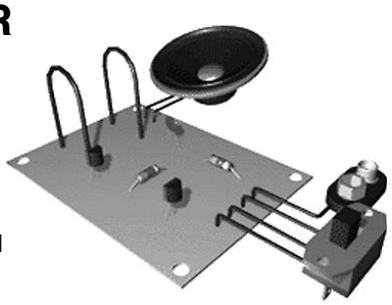
BINARY CLOCK

Looks great, keeps good time and fortunately not everyone can read it. You have to know about the binary number system to be able to tell the time.

Part No. 32EKI2098 • Price: $58.75

EDUCATIONAL KITS

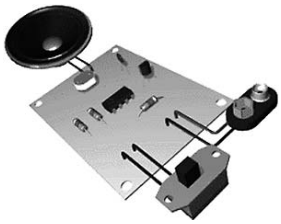
LIE DETECTOR



This circuit is a simple skin resistance monitor. Have the "subject" place a finger on each of the contacts. When the subject" becomes nervous or uncomfortable, skin resistance changes and the frequency heard through the speaker goes higher. Teaches transistor oscillator.

Part No. 32EKI2013 • Price: $8.25

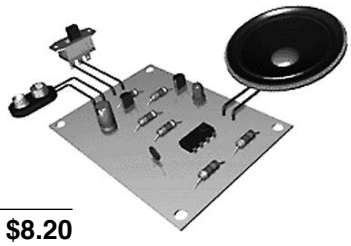
WAKE-UP ALARM



This circuit turns on when light hits the photocell. Teaches 555 programming and photocell.

Part No. 32EKI2039 • Price: $8.20

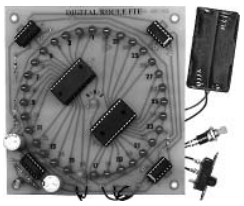
ULTRASONIC PEST REPELLER



This kit generates a signal that oscillates between about 18KHz and 80KHz every few seconds. This is irritating to many bugs, etc. and drives them away. Teaches 555 programming and transistor oscillator.

Part No. 32EKI2025 • Price: $8.20

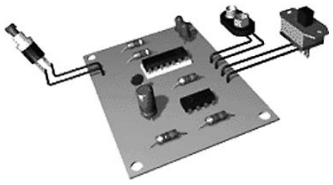
DIGITAL ROULETTE



Will be a sure winner with you, your friends and your relatives. Thirty-two LEDs are arranged in a five-inch circle.

Part No. 32EKI2058 • Price: $29.50

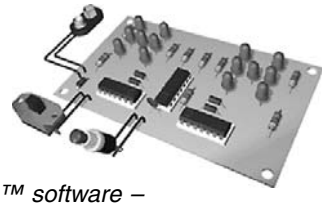
DOUBLE DECISION MAKER



The deluxe heads or tails game. Green = heads, red - tails, both or neither = maybe. Teaches 555 programming and counters.

Part No. 32EKI2011 • Price: $8.25

POCKET DICE*

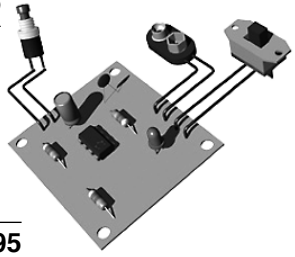


A handy device to be used with any game of chance. This project is fun and useful and everyone will love to use it.

****FREE SOFTWARE***: *Free Kit Prep™ software – one disc per type of kit with purchase of above kit.*

Part No. 32EKI2001 • Price: $16.20

REACTION TESTER



Test your timing by trying to hit the button while the LED is lit. Since the LED is lit only 1/10 second at a time, you must anticipate the LED. Runs on 9V battery *(not included)*. Teaches 555 timer programming.

Part No. 32EKI2007 • Price: $7.95

AUTOMATIC NIGHT LIGHT

This circuit automatically turns on when it gets dark. Use the potentiometer to adjust how dark it needs to get before it turns on. Teaches photocell and transistor.

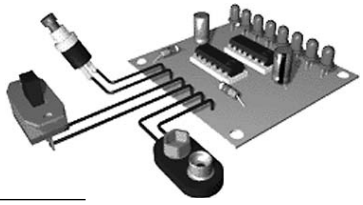
Part No. 32EKI2010 • Price: $8.25

HEADS OR TAILS

Turn the circuit on and the red and green LEDs begin to flash. Push the button and the circuit stops with one LED held on. Green = heads, red = tails. Teaches 555 programming.

Part No. 32EKI2008 • Price: $7.25

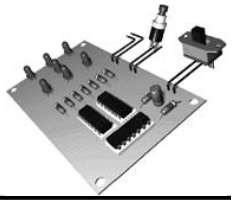
POT SHOT



8 LEDs light sequentially. Hit the button on the top LED and the light stays on, you win. Hit the button another time and all the lights go off. Adjustable frequency.

Part No. 32EKI2017 • Price: $8.25

DIGITAL DICE



This single dice is fun to build, and fun to display and play

Part No. 32EKI2068 • Price: $12.95

EDUCATIONAL KITS

HIDDEN TORMENTOR*

The perfect project to drive your family and friends crazy. Hide it well and they can spend hours finding the source of its intermittent and thoroughly annoying noise.

***FREE SOFTWARE**: *Free Kit Prep™ software – one disc per type of kit with purchase of above kit.*

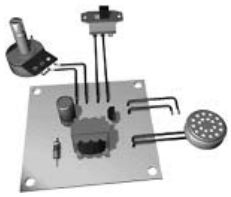
Part No. 32EKI2088 • Price: $9.25

SPACE WAR GUN

Creates those realistic sound effects you hear in space science fiction movies.

Part No. 32EKI2003 • Price: $11.95

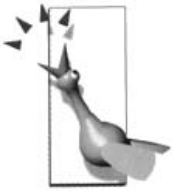
FISH CALLER



This kit is scientifically designed to sound like food and attract hungry fish in the vicinity.

Part No. 32EKI2018 • Price: $11.20

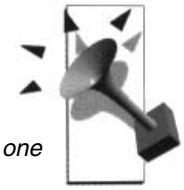
DIGITAL BIRD



A fantastic dinosaur/bird sound generator that sounds like nothing you have heard before

Part No. 32EKI2078 • Price: $12.00

WHOOPER ALARM*

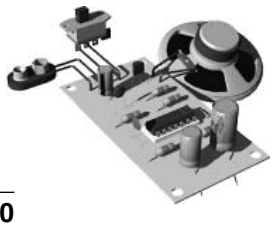


Makes an excellent alarm device for the Combination Lock/Alarm Control. it can also be used independently as a sounder or siren

***FREE SOFTWARE**: *Free Kit Prep™ software – one disc per type of kit with purchase of above kit.*

Part No. 32EKI2050 • Price: $9.20

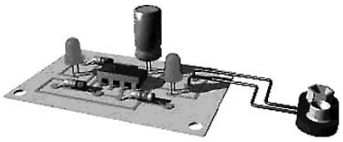
AUTOMATIC SIREN



Definitely sounds like the real thing. Can be used with a burglar alarm or as an attention getter.

Part No. 32EKI2024 • Price: $11.20

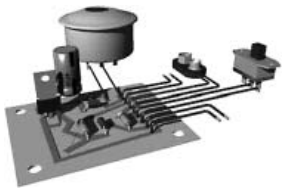
LED BLINKER



Two super-diffused LEDs pulse out light for hours on end. Easy to assemble and fun to use.

Part No. 32EKI2099 • Price: $5.40

BURGLAR ALARM*

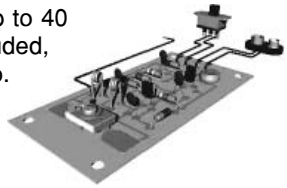


An easy-to-build alarm for your car, house, room or closet. Keep the snoop out of your stuff!

***FREE SOFTWARE**: *Free Kit Prep™ software – one disc per type of kit with purchase of above kit.*

Part No. 32EKI2006 • Price: $9.25

FM MICROPHONE TRANSMITTER*



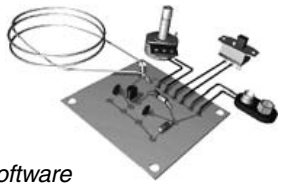
Confound and amaze your friends with this actual radio transmitter! It transmits up to 40 feet. With the crystal microphone included, you broadcast to any nearby FM radio.

***WARNING:** Not to be used for jamming radio to TV reception*

***FREE SOFTWARE**: *Free Kit Prep™ software – one disc per type of kit with purchase of above kit.*

Part No. 32EKI2045 • Price: $11.20

METAL DETECTOR*



A cousin to early army mine detectors and today's super sensitive solid state metal locator. So go ahead, find buried treasure! It works with any portable AM radio.

***FREE SOFTWARE**: *Free Kit Prep™ software – one disc per type of kit with purchase of above kit.*

Part No. 32EKI2004 • Price: $7.25

SIREN CODE OSCILLATOR

Is really two projects in one. This functions as an excellent code practice oscillator as well as a siren. Use at home or on your bicycle, etc.

Part No. 32EKI2012 • Price: $9.25

AUDIO AMPLIFIER / INTERCOM

This kit can be used as a PA amplifier, phono amp., a "bug" or an intercom. Use it at home, in your RV, boat, or anywhere else you need a compact amplifier system.

Part No. 32EKI2086 • Price: $14.95

FUZZ BOX

A two-transistor amplifier that adds distortion to the output signal of an electric guitar.

Part No. 32EKI2026 • Price: $12.20

Global® Specialties SOLAR FAN KIT

This circuit converts sunlight into electrical energy. The fan speed is controlled by the intensity of the sun collect by the solar panel. This kit provides a rudimentary demonstration for how solar energy works.

Part No. 32GSK1001 • Price: $19.25

Global® Specialties SOLAR GUIDE LIGHT KIT

This circuit illuminates 5 LED's when there is not sufficient sunlight for the solar panel to charge batteries. The LED's will automatically turn on and draw voltage from the batteries when the solar panel can no longer convert sunlight to DC voltage.

Part No. 32GSK1004 • Price: $21.25

Global® Specialties SOLAR BLINKING LIGHT KIT

This is a blinking light circuit power by the energy of the sun. Utilizing a solar panel to convert the suns energy two LED's will alternatively blink and the blinking speed may be adjusted.

Part No. 32GSK1005 • Price: $17.00

Global® Specialties MOSQUITO REPELLENT KIT

This circuit generates a frequency 10-30 kHz that creates a sonic zone disturbing to mosquitoes. A piezo board creates the frequency equal to the frequency generated by the mosquito during flight causing the mosquito to believe he/she is flying into a trap.

Part No. 32GSK918 • Price: $4.25

HOLD BUTTON

Puts all incoming and outgoing calls on hold at touch of a finger.

Part No. 32EKI2092 • Price: $6.95

Global® Specialties BATTERY CHARGER KIT

This kit contains parts to assemble a Lithium-ion Polymer battery charger. These batteries are becoming popular with radio controlled devices, iPods®, MP3, and laptop computers.

Part No. 32GSK819 • Price: $19.50

Global® Specialties VOLTAGE BOOSTER KIT

This DC voltage booster circuit enables a 12 V DC source to be converted (stepped up) to a higher DC output voltage

Part No. 32GSK820 • Price: $30.75

Global® Specialties VOICE CONTROL SWITCH KIT

Classified as a remote controlled circuit this product uses an audio signal (clap on) to activate the on/off function of the switch. A sensitivity/volume controlled microphone picks up audio signal activating a relay generating an electrical signal to the switch.

Part No. 32GSK409 • Price: $8.75

Global® Specialties DC MOTOR SPEED CONTROL KIT

This circuit allows the user to vary the speed of a DC motor from a stop position to maximum revolutions per motor specification.

Part No. 32GSK804 • Price: $10.95

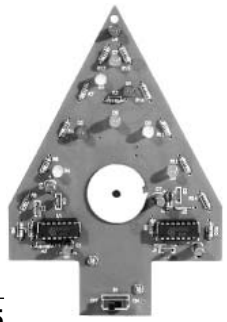
Global® Specialties MOISTURE RESISTANCE INDICATOR KIT

This checker utilizes resistance to measure dissolved solids in water. The more resistance, the less conductive the water; as resistance levels lessens the materials that conduct electricity are elevated. Results are displayed by a series of (8) LED's.

Part No. 32GSK944 • Price: $10.50

ELENCO™

CHRISTMAS TREE



- Produces flashing colored LED's
- Three popular Christmas melodies
- Requires one 9V battery *(Not Included).*

Part No. 32ELENK14 • Price $11.95

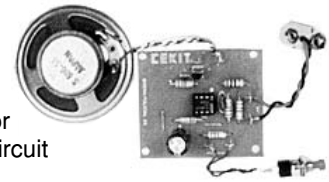
velleman HIGH-Q kit METAL DETECTOR

Intermediate Level

To come up against an electric cable while drilling a hole in a wall can have catastrophic consequences. Likewise, drilling into gas, water pipes or central aheating pipes can be extremely hazardous. With a handy metal detector, it can now be determined beforehand whether there are metal objects to be found in a wall, ceiling or floor. An LED indicates if a metal object is in the vicinity of an audio signal is also desired, space has been provided on the PCB for buzzer type SV4/12 to be connected. The PCB has been specially constructed to fit entirely into the separately available box type G407. Battery supply: 9V battery (*not included*).

Part No. 32VK7102 • Price: $15.95

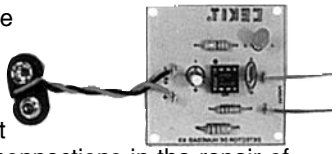
POLICE SIREN



This circuit produces a siren effect similar to the European style police sirens. Use it alone or together with any alarm control circuit for a very unique effect.
Principles Taught: 555 oscillator, tone generator

Part No. 32EKI2106 • Price: $7.35

MOISTURE DETECTOR



This kit can be used to monitor the moisture around your plants. The LED flashes according to the amount of moisture it measures. The kit can also be used as a test instrument to check for electrical connections in the repair of appliances
Principles Taught: 555 control

Part No. 32EKI2109 • Price: $8.20

velleman HIGH-Q kit WATER ALARM

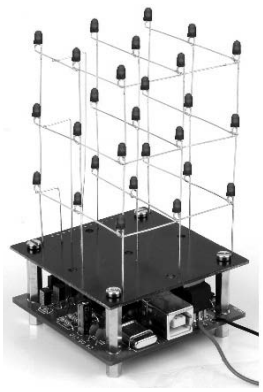
BEGINNER LEVEL

Incorporated alarm buzzer sounds when water detected. Water sensor can be placed at a distance. 9V battery not included.

Part No. 32VK108 • Price: $4.95

velleman 3D LED CUBE 3X3X3

MODEL MK193



- LEDs: 3 x 3 x 3 = 27 LEDs (30 LEDs supplied)
- large amount of user programmable frames
- user programmable via USB (creation of animation/scenes)
- colour:
- standard: red version
- Soldering skills required
- Software:
  - Create all the animations you want and share them with others!
  - Divide your animation into multiple scenes
  - Up to 234 animation frames
  - Supports basic geometric operations (shift, rotate...)

Part No. 32VMK193 • Price: $29.95

SonicTechnology SuperEar™

PERSONAL SOUND ENHANCER

SUPEREAR – 50dB
SUPER EAR PLUS – 107dB

Binoculars for your ears. Powerful sound amplification indoors and outdoors. Nature lovers, senior citizens and sports fans enjoy a whopping 50dB sound gain. Multi-element microphone mounted on swiveling sound boom with protective foam windscreen cover. Also includes premium stereo headphones that deliver crisp, clean sound in the full audio range.

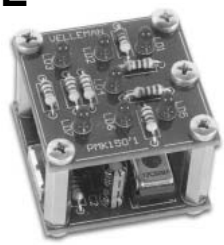
- Pick up bird calls from 100 yards away
- Enjoy sounds of nature as never before
- Use for meetings, lectures, watching TV, ceremonies
- Mount directly onto binoculars, attach to pocket, belt or gear
- Complete with pocket clip, binocular mountings and a 1.5V AAA Battery

SuperEar Plus Model
Ideal for the slight to moderate hearing impaired person. Complies with the Americans with Disabilities (ADA) act for requirements for Assistive Listening Device. Perfect for watching TV, attending meetings or simple conversations. Features a volume control located on the headphone leads for easy adjustment, and auto-off after 30 minutes.

Note: *Use of sound amplification device for easvesdropping purposes is not only impolite, but also illegal.*

Part No.	Description	Price
26SUPEREAR	50dB Unit	$31.50
26SUPEARPLUS	107dB Unit	58.95

velleman SHAKING DICE



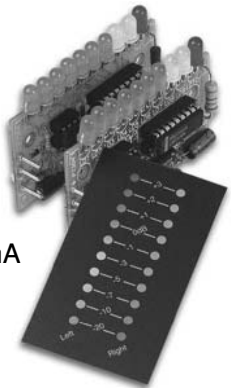
Features
- No push buttons required, just give It a shake
- Rolls out slowly and flashes last combination
- Microprocessor-controlled
- Auto power-off

Specifications
- Power supply: 3V-battery (battery not included)

Part No. 32VKMK150 • Price: $10.95

velleman STEREO VU-METER

Stereo VU meter with 2 x 10 LEDs (dot or bar indicator) and an adjustable input. Included in package : 1 front panel suitable for horizontal or vertical mounting.

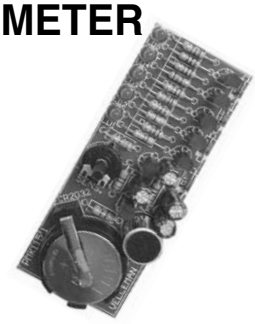


Specifications
- Range: -20dB to +3dB
- Power supply: 10 - 15V DC / 250mA
- Input sensitivity:
- Low input: 150mV to 6Vrms (47K)
- High input: 1.5V to 60Vrms (470K)
- Dimensions: 1.5 x 2.7" (x2)

Part No. 32VKK4305 • Price: $29.95

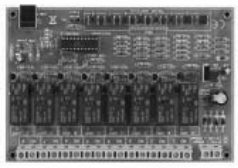
velleman POCKET VU-METER

Surprise your friends in the disco.
- 5 red LEDs.
- Built-In microphone.
- Adjustable sensitivity.
- power supply: 3V type CR2032 battery (not incl.)



Part No. 32VKMK115 • Price: $7.50

velleman 8-CHANNEL USB RELAY CARD

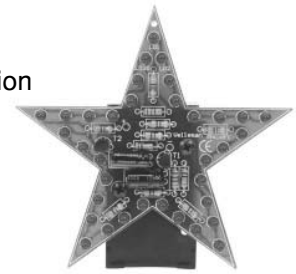


- USB controlled relay card
- 9V battery snap includedManual operation (selectable through software)
- Timer settings up to 18 hours (DLL function)
- DLL for own software development (download only)
- Two way PC communication (USB Event return)
- Power supply for relays: 9-10VAC or 12 to 14VDC (500mA), example: PS1205
- 8 high-power relays: 16A each (resistive load)
- Dimensions: 160 x 017 x 30mm / 6.3 x 4.2 x 1.2"

Part No. 32VKK8090 • Price: $64.95

velleman FLASHING LED STAR

Features
- Great seasonal gadget !
- Safe battery operation
- Select: flashing or static operation
- Application: desktop or hanging from the ceiling
- Multiple kits enhance the effect
- In-car (12V) operation possible

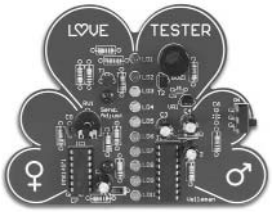


Specifications:
- 35 LEDs
- Power supply: 1x 9V battery (not incl.)
- Current consumption: 40mA (static mode)
- Flash duty cycle: 1:2
- Dimensions: 3.54 x 3.54"

Part No.	Description	Price
32VKMK169R	Flashing LED Star, Red	$12.95
32VKMK169Y	Flashing LED Star, Yellow	12.95

velleman LOVE TESTER

Features:
- Check your love life !
- Each partners holds one end of the PCB, then they join hands, watch the meter go
- Great fun at parties, among friends, etc...



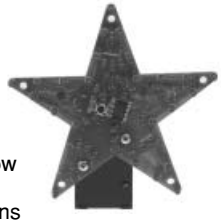
- 10-LED readout plus audible 'love-level'-indication
- Flashing LEDs indicate you're a red-hot lover
- Wide sensitivity range covers the entire spectrum, from the cool to a steaming Latin lover!
- Power switch included

Specifications:
- Power supply: 9V battery (not included)
- Dimensions: 4.1 x 3.1 x 0.98"

Part No. 32VKMK149 • Price: $14.95

velleman 60-LED MULTI EFFECT STAR

Features
- Processor-controlled LED star creating multiple dazzling effects
- Extra LEDs included, allowing different colour combinations:
  - make your own mix of red and yellow LED's or make the star fully red or yellow
- On-board effect selection push button
- 24 effects: 3 static, 15 blinking, 6 animations with fading "All effects" sequencing is possible (standard setting)

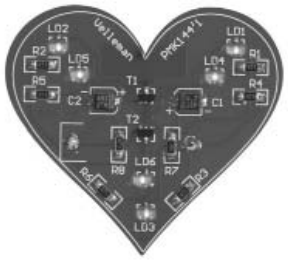


Specifications:
- 60 LEDs on board
- Power supply: 9 to 12Vdc adapter or battery (not incl.)
- Current consumption: 20mA (static mode 9V battery)
- Dimensions: 4.13 x 4.33 x 1.38"

Part No. 32VKMK170 • Price: $29.95

EDUCATIONAL KITS

velleman SMD FLASHING HEART

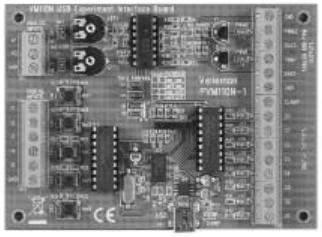


Features
- Miniature size gadget
- 6 LEDs flash alternately
- Can be operated pending (e.g. around the neck) or can be worn as a badge (pin supplied)
- Great attention grabber
- Ideal introduction to SMD (Surface Mounted Device) technology
- Some extra parts are supplied, in case some get lost or damaged

Specifications
- Power supply: 3V Li button cell (Cell not included)
- Power consumption: 5mA approx.
- Dimensions: 1.9 x 1.7 x 0.3"

Part No. 32VKMK144 • Price: $9.50

velleman USB INTERFACE CARD

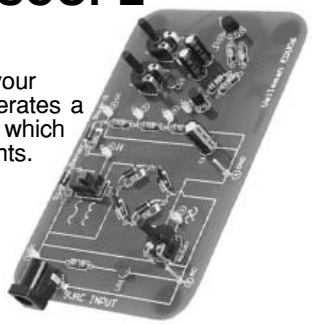


The VM110N interface board has 5 digital input channels and 8 digital output channels.

- In addition, there are two analog inputs and two analog outputs with 8 bit resolution
- The number of inputs/outputs can be further expanded by connecting more (up to a maximum of four) cards to the PC's USB connectors.

Part No. 32VKVM110N • Price: $74.90

velleman OSCILLOSCOPE TRAINING KIT



Learn how to get the most out of your digital oscilloscope. The board generates a number of safe 'real-world' signals, which we will use to perform measurements. Get familiarized with AC, DC and frequency measurements, sine and square waves, power supply ripple, full and half wave rectifiers, oscillators etc…

Learn what terms such as V/div, Time/div, trigger level, auto-setup etc… mean. All experiments featured in this project are performed with the Velleman HPS140 Handheld Pocket Scope. Most experiments can be done with any digital storage scope. Some experiments can be performed with an analog scope.

Features:
- Signals:
- Alternating current (AC)
- Adjustable AC
- Full-and half wave rectified AC
- Smoothed direct current (DC)
- Ripple
- Astable oscillator
- Assembled and tested, no soldering required

Specifications:
- Power supply: 9...12VAC / min.100mA (adapter not incl.)
- Dimensions: 116x74x24mm / 4.6x2.9x0.9"
- Optional: 9VAC /500mA adapter PS905AC

Part No.32VKEDU06 • Price: $29.50

velleman USB TUTOR MOUNTED

Part of our EDUKIT range
Starting from an already made example program, this module will teach you how to:
- Read up to 8 push buttons and activate a PC event
- Light up to 8 LEDs using your PC
- Read the value of 2 different potentiometers (analog value)
- Read and display the temperature on the PC
- Read the value of a temperature dependent resistor (NTC)
- Read the value of a light dependant resistor (LDR)
- Dim a white LED using your PC
- Learn how to display text on an LCD using your PC
- Learn how to combine the above and use the LCD to display push button press, display values..

Specifications
- USB powered + LED indicator
- PC with windows XP or higher (internet needed for software download)
- Digital input/output:
- 8 definable push buttons
- 8 definable LEDs
- 1 White LED
- Analog input:
- Temperature sensor
- NTC resistor
- LDR resistor
- 2 potentiometers
- Display:
  16 character 1 line LCD

Includes:
- USB cable
- Board dimensions: 75 x 75mm / 3x3"

Part No. 32VKEDU05 • Price: $69.95

velleman SOLDERLESS EDUCATIONAL STARTER KIT

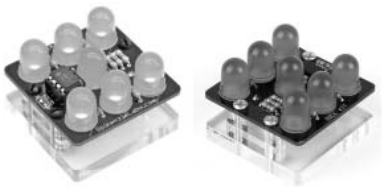
The EDU01 basic experiment kit is the first step into the world of modern electronics. Build your own circuits in a fun, safe and educative way. The kit contains a breadboard and all necessary components to get started right away. You will finish assembling your first circuit in just a few minutes…

Features:
- Part of our EDUKIT range
- 10 exciting projects to build
- No soldering required
- High-quality breadboard with 456 contact terminals
- Extended manual
- Projects include: blinking LEDs, burglar alarm, light sensor, polarity tester, start-stop circuit, timer, running light, water alarm and more...

Specifications:
- Breadboard dimensions: 80 x 60mm / 3.15" x 2.36"

Part No. 32VKEDU01 • Price: $19.95

LED DICE KIT



There is only one die per kit (you do have your choice of red or green LEDs). Designed for beginners, the kit comes with everything you need to make one 'Electronic Die'. Tap the completed kit on the table and the LEDs light up and show a number from 1 through 6. After a short while, the LED dice goes into sleep mode, until the next time it is tapped.

Part No.	Description	Price
32MKDGRN	Green color	$18.99
32MKDRED	Red color	18.99

velleman AUDIO ANALYZER

Small and compact unit, ideal for panel mounting.
Give your homemade audio gear a high-tech look. Upgrade existing equipment.

Features
- Measure:
  - Peak power
  - RMS power
  - Mean dB
  - peak dB
  - Linear audio spectrum
  - 1/3 octave audio spectrum
- Auto or manual range selection
- Peak-hold function
- Speaker impedance selection
- Language selection
- White backlit LCD
- Easy panel mounting

Specifications

power measurement into 2, 4 or 8 ohms + bridged amp option
range: 300mW to 1200W @ 2 ohms
sensitivity: -34dBu (15.5 mVrms)
max. input level: 50Vrms @ 220k
frequency range: 20Hz to 20kHz
power supply: 12VDC / 75mA
dimensions:
display: 128 x 64 pixels (46 x 23mm / 1.8 x 0.90")
front panel: 98 x 51mm / 3.8 x 2"
mounting depth: 35mm / 1.37"

Part No. 32VKK8098 • Price: $59.95

velleman 3 W MONO AMPLIFIER

Small but powerful amplifier suits a wide range of applications such as: portable PA, for doorbells, melody generators, intercom, sound effects, earphones, radio receivers, PC sound card, guitar amp, ...

Features
- Compact size
- Low partcount
- No additional heatsink required
- Single supply
- Wide supply range
- Excellent protection

Specifications
- Output power: 3Wrms (4-8 ohm, 15VDC, 10% THD)
- Frequency range: 50Hz - 20kHz (1W/8ohm, -3dB)
- Gain: 32dB (40x)
- Thermal and Short circuit protection
- ZCurrent consumption: 500mA max.
- Dimensions: 1.6 x 1.9"

Power supply: 6 ~ 15VDC SOLD SEPERATELY

Part No. 32VKK8066 • Price: $12.00

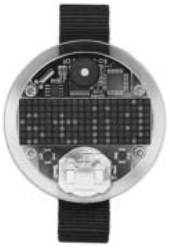
SOLDER: TIME WATCH KIT

Solder:Time is an easy to solder real time watch kit with a unique laser cut acrylic casing. Four individual acrylic parts are cut to fit the internal PCB, battery and switch perfectly. Includes a velcro wrist band. After soldering the Solder:Time, the watch is built by stacking the acrylic parts with the PCB and holding it together with the included screws. Solder:-Time is a true conversation starter that looks great and is completely functional.

Features:
- Great looking laser cut acrylic case
- Unique watch
- Easy to solder
- Stand alone project - no computer or other programmer required. Just solder it and it's ready!
- On board Dallas DS1337+ Real Time Clock (RTC) for super accurate time keeping
- Jumper (on bottom) for always on use.
- Hackable: Programming and I2C pads labeled on bottom
- Clear front and back casing to show the internal electronics
- Adjustable wrist band
- Can also be worn as a badge with optional badge clip.
- Long lasting battery, with special LED lighting method and very low power processor sleeping.

Part No. 32MKSTK1 • Price $32.95

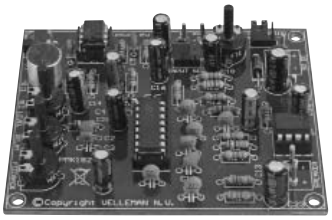
SOLDER: TIME II WATCH KIT



The Solder: Time II is an upgraded version of our Solder: Time Watch Kit. This new version is more hackable than ever. The Solder: Time II uses the same ATmega328P microcontroller used in the Arduino UNO, allowing you to program it using the Arduino software.
The Solder: Time II has a very impressive display. Four 5x7 LED matrix modules gives you control of a 7x20 matrix for a total of 140 LEDs! The new LED matrix allows for an amazing amount of information to be displayed; time, date, month, words, scrolling messages, graphics, special characters ... the possibilities are endless. The STII also has a piezo buzzer for the alarm. You can also use it to add sounds to you custom programming or even write games that you can play on your wrist!
The watch comes preprogrammed and requires soldering and assembly which should take less than one hour.

Part No. 32MKSTK2 • Price $59.00

velleman DIGITAL ECHO CHAMBER



Great effect tool - tool - tool!!! Can be used for various audio systems, karaoke, PA; toys, or just for fun

- 4 Adjustable for MIC or input level or output level, echo delay time, volume or SRAM for low distortion and good sound quality. Onboard microphone and audio amplifier, line-in & line-out connection
- 9V battery snap included
- Power supply: 9V battery (battery not included) or 9...12V DC regulated
- Power consumption: 150mA max.
- Delay time: 80...200ms
- Speaker output: 500mW (8 ohm, 10% THD)
- Dimensions: 85 x 70 x 20 mm / 3.5 x 2.76 x 0.78"

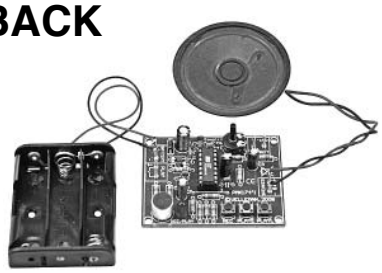
Part No. 32VKMK182 • Price: $18.95

SIGNAL GENERATOR KIT

- Signal output: sine wave, triangle, square wave and integrator (selectable through jumper)
- Signal frequency: about 1kHz (fixed)
- Output level: adjustable from 0 to 100mVrms (LEVEL potentiometer)
- Power supply: 9V battery (not incl.)
- Dimensions: 2.2" x 1.6"

Part # 32VKMK105 • Price: $4.90

velleman SINGLE-MESSAGE RECORD/PLAYBACK PROJECT



- Record time between 10 and 35 sec. (adjust the sample rate)
- Onboard microphone
- Speaker Ø 57mm included
- l Line-out to drive external amplifier, e.g. for
  - — K8066: 3W mono amplifier
  - — K4001: 7W mono audio amplifier
- eExternal trigger input to play message
- 3 x AA battery holder included
- Using the speed adjust a " funny voice" can be created
- Power supply: 4.5V battery (3 x AA not incl.), ex.LR6BL

Part No. 32VKMK174 • Price: $29.90

velleman 100W SUBWOOFER KIT

Kit contains all necessary parts to build your compact but powerful high quality subwoofer. (Wooden panels not included!)

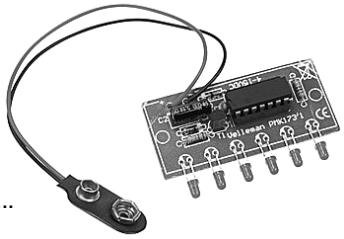
- Bass-reflex system with adjustable tube
- Compact size due to dual-speaker principle
- Adjustable level and filter response
- Auto power-on/off system
- Phase switch (0 -180)
- Line level and speaker level inputs for maximum compatibility
- 'Full-range'-option for use in active speaker system
- Separate chamber for electronics avoids air leaks

SPECIFICATIONS

- **Power output:** 100Wrms/ 4ohm (10% THD)
- Filter freq. response:
- **Wide:** 25 - 110Hz (-6dB)
- **Narrow:** 18 - 65Hz (-6dB)
- **Speakers:** two 6.5" 8 ohm drivers
- Line level input sensitivity: 500mV
- Auto turn-on level: 5mV
- **Volume*:** approx. 20 liter
- **Power supply:** 120/230VAC
- **Dimensions:** 460x310x210mm / 18,22 x 12,28 x 8,32"

Part No. 32VK8077 • Price: $139.95

velleman MINI-6-LED CHASER



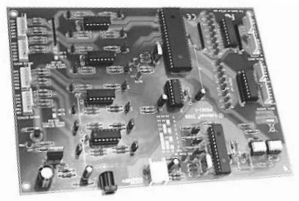
- 1 LED scans from side to side
- As attention grabber in stores, at exibitions, etc...
- As seen in classic TV series...
- Applications:
  - — Toys
  - — Scale and RC models
  - — As gadget
  - — For stage, plays, movies, etc...
- 6 high-intensity 3mm red leds

SPECIFICATIONS

- Power supply *(required)*: 4-15VDC (20mA at 12VDC)
- Fixed scan speed (side to side): 0.5s
- Dimensions: 55 x 25 x 10mm / 2.18 x 0.99 x 0.39"

Part No. 32VKMK173 • Price: $12.95

velleman EXTENDED USB INTERFACE BOARD KIT



This interface board kit *(requires assembly)* has a total of 33 input/outputs: including analogue / digital and + 1PWM output.
Connection to the computer is galvanically-optically isolated, so that damage to the computer is not possible thus providing a high level of secure implementation.
All communication routines are contained in a Dynamic Link Library (DLL).
You may write custom Windows* applications in Delphi, Visual Basic, C++ Builder or most other 32-bit Windows application development tool that supports calls to a DLL.
For first time interfacing and tutoring, check K8055 USB experimentation interface board
* WinXp recommended for optimum compatibility
* Are registered trademarks of MICROSOFT CORP.

- 8 analogue 10 bit resolution inputs: 0…5 or 10VDC / 20kohm
- 8 analogue 8 bit resolution outputs: 0…5V or 10VDC / 47ohm
- 8 digital inputs: open collector compatible (connection to GND=0) with on board LED indication
- 8 digital open collector outputs (max. 50V/100mA) with on board LED indication
- One 10 bit PWM output: 0 to 100% open collector output (max 100mA / 40V) with on board LED indication.
- General response time: 4ms per command
- USB Port: 2.0 and 1.1 compatible (USB cable included)

SPECIFICATIONS

- Power consumption through USB port: approx. 60mA
- Up to 8 cards can be connected to PC
- Power supply through adaptor: 12Vdc / 300 mA (PS1205)
- PWM Frequency: 15,6 KHz
- Standard execution time: 48mS (use Microchip and K8061D.DLL drivers)
- Enhanced execution time: 21mS (use K8061_C.DLL V1.0 by RE Applications)
- PCB Dimensions: 195 x 142 x 20mm (2.7 " x 5.6" x 0.8")
- Minimum system:
- Pentium class CPU with free USB port (1.1 or higher)
- Windows 98SE or higher (Win NT excluded) *
- CD ROM player and Mouse

Part No. 32VK8061 • Price: $139.00

velleman-kit HIGH-Q

RUNNING MICROBUG

Soldering project. Light-attracted, bug-shaped robot kit. Advances toward light source. Adjustable. Stops in total darkness.

Part No. 32VMK127 • Price: $10.50

velleman-kit HIGH-Q

CRAWLING MICROBUG

Soldering project. Bright colored, bug-shaped robot kit. Advances toward light. Two open chassis sub-mini motors. Adjustable light-sensitivity and speed. Choose between two different walks. Stops in total darkness.

Part No. 32VMK129 • Price $11.95

velleman

MULTIFUNCTIONAL INVISIBLE INK PEN

MODEL VDLIIP

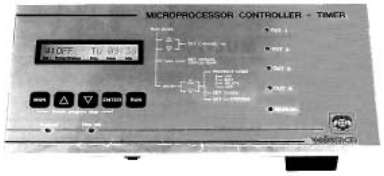
- The words you write are invisible in normal day-light, but they appear under the light of the pen
- Can be used to detect counterfeit money
- Suitable for a variety of fun applications: secret messages, security markings, party gadget, ...

Part No. 32VDLIIP • Price: $4.50

velleman-kit HIGH-Q

MICROPROCESSOR CONTROLLER / TIMER

MODEL K6000



Requires soldering. In addition to conventional week/day timer features, this controller may be used to regulate temperature independently with one or all four outputs. Up to 4 sensors. Temperature may be measured far from the actual controller. Controller displays a message when a sensor is out of order and will switch off the corresponding output. Equipped with LCD display, data such as output number, temperature or on/off, day and time are displayed. 4 noise-free relay outputs: max, 5A. 4 optocoupler inputs for temperature sensors. 50 program steps per output (total 200). Week or day programming. 110V operation. Memory back-up capability. Transformer included.

Part No. 32VK6000 • Price: $145.00

velleman

ELECTRONIC CRICKET

Can be used for fun or to simulate a hot summer night. Automatically comes on when it gets dark. Cricket repetition (time between two crickets), effect and tone adjustable. Adjustable light sensitivity.

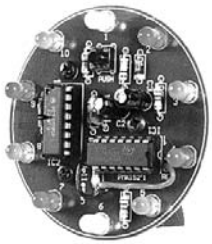
Consumption: 5mA
Power Supply: 9V Battery *(Not Incl.)*
Dimensions: 2.4 x 0.4 x 1"

Part No. 32VMK104 • Price: $5.95

velleman-kit HIGH-Q

WHEEL OF FORTUNE

10 LED's (red, yellow and green). Push the button to start spinning action. Spinning action gradually decreases. Finally, it stops and one LED remains lit. Auto power-off. Requires 9V battery.

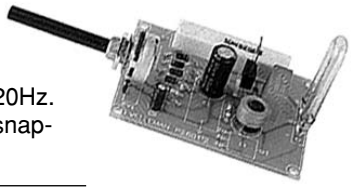


Part No. 32VMK152 • Price $6.75

velleman-kit HIGH-Q

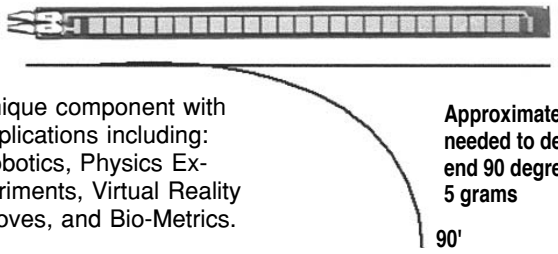
STROBOSCOPE

Adjustable flash frequency 2 ~ 20Hz. Input 110VAC. Make your own snapshots and "lightning" effects.



Part No. 32VK5300 • Price: $21.95

FLEX SENSOR



Unique component with applications including: Robotics, Physics Experiments, Virtual Reality Gloves, and Bio-Metrics.

Approximate force needed to deflect end 90 degrees: 5 grams

- Changes resistance in proportion to degree it is bent.
- Nominal resistance 10K.
- Maximum resistance 40K.
- At 90 degrees approximately 35K
- **Dimensions:** 4 1/2" x 0.02"

Part No.	1-9	10+
32FLXSENS	$17.95	$15.95

velleman-kit HIGH-Q ELECTRONIC KITS

LIGHT BARRIER IR

Applications : announce visitors, warn against burglars, set boundaries, for science projects,...

- Audible (85dB) and visible (LED) alert
- Range: 3.3 ft to 13 ft
- On/off switch provided
- Power supply:
  - Transmitter: 9V DC/50mA max.
  - Receiver: 9V DC / 20mA max.
- 9V battery holder and adapter jack included
- dimensions:
  - Transmitter: 2.2" x 1.6"
  - Receiver: 3.9" x 2.0"
- Not recommended for outdoor use

Part No. 32VKMK120 • Price: $8.95

FM RADIO

- Double fun: building and listening !
- Easy to assemble: no coils to wind
- One single adjustment
- Pre-assembled and tested FM front end
- Receives the complete FM band: 88-108 MHz
- With ON/OFF switch, volume control and LED indicator
- **Dimensions:** 4.8" x 3.3"

Part No. 32VKMK118 • Price: $21.50

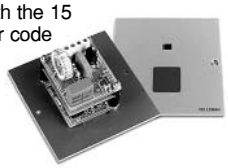
FLASHING LED'S

BEGINNER LEVEL

Applications include model construction. Adjust flashing speed with trimpots. 9V battery not included.

Part No. 32VK102 • Price: $3.50

IR REMOTE CONTROLLED DIMMER



This one channel IR receiver/dimmer works together with the 15 channel IR transmitter (K6710 and K8049). The receiver code can be set to 1 of the 15 transmitter codes so that 15 receivers can be operated (K6712 and/or K6713) independently of each other. Thanks to its compact design this kit fits into a standard light switch housing.

Part No. 32VKK6712 • Price: $46.50

PIC PROGRAMMER & EXPERIMENT BOARD

- Suitable for programming Microchip® FLASH PIC™ microcontrollers
- Supports 4 different 300 mil. PICs: 8p, 14p, 18p and 28p
- Test buttons and LED indicators to carry out educational experiments, such as enclosed programming examples.
- Easy connection to PC through the serial port
- Enclosed is a Flash Microcontroller (PIC16F627) that can be reprogrammed up to 1000 times for experimenting at will
- Software to compile and program you source code is included
- Minimum system requirements: IBM Compatible PC, Pentium or better; Windows 95/98/ME/NT/2000/XP, CDROM, Free serial RS232 port, cable *not included* (e.g. CW014)
- **Dimensions:** 5.75" x 4"

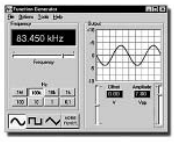
Part No. 32VKK8048 • Price: $34.95

BRAIN GAME

Just 4 LEDs and 4 push buttons provide hours of fun. The aim-of-the-game is to repeat a pattern, which is generated at random. The pattern is played both visually and audible or visually only (selectable). It features 4 difficulty levels, which can be selected at start-up. The replay speed gradually increases during the game, to make it even more challenging. Low power consumption. Microprocessor controlled. Auto power off. **Dimensions:** 2.0" x 2.6"

Part No. 32VKMK112 • Price: $10.25

PC FUNCTION GENERATOR



- Frequency range: From 0.01Hz to 1 MHz
- Crystal-based stability
- Optically isolated from the PC
- Low sine wave distortion
- TTL level synchronization output
- Stores up to 32K of waveform points
- Standard waveforms: Sine, square and triangle
- Predefined library waveforms included: Noise, sweep
- Includes Windows 95/98/NT/2000/X) integrated software for the function generator and Velleman PC oscilloscopes
- You can create your own waveforms with the integrated signal wave editors
- Can be chained with Velleman PC oscilloscopes to the same PC printer port (LPT1, 2 or 3)
- Function generator screen with signal preview
- Minimum system requirements: IBM compatible PC/ Windows 95, 98, ME, (Win2000, XP or NT possible), SVGA display card (mi. 800x600), mouse, free printer port, CD Rom player

Part No. 32VKK8016 • Price: $130.00

4 CHANNEL RECORDER/LOGGER

- Record DC signals or slow moving signals over very long period
- The measurements are automatically stored on your hard disk for further processing
- Through the use of USB connection, there is no need for power supply and installation is easy and straight forward
- Signals are instantly displayed on the PC screen using analog or DVM display
- USB cable included
- PC-LAB2000 Software included
- Comes with enclosure

SPECIFICATIONS:

Hardware:
— USB connected and powered
— Four DC coupled input channels
— Maximum samples per second - 100
— Four input ranges - 3V/6V/15V and 30V
— Sensitivity - 10mV
— Accuracy - 3% of full scale
— Maximum Input - 30V DC
— Power and recording/diagnostic LED

Software:
— Analog trace or digital DVM readout
— 4 simultaneous channels recording
— Minimum/maximum sample hold function for DVM
— From 1 sec to 1000 sec per division
— Storage and recall of screens (full color) or data
— Automatic recording option for long time recordings
— On screen markers for time and voltage
— DLL included for own development

System Requirements: PC running Win98SE or higher (does not work on WinNT or Win95); free USB port; mouse; CD-rom player

Part No. 32VKK8047 • Price: $42.95

velleman-kit HIGH-Q

ELECTRONIC KITS

MOVING MESSAGE DISPLAY

RED LEDS

Advanced Level

Create your own message for personal advertisements. 12 self definable characters, which are made by the customer. 150 bright LED's supplied with the kit. Many spectacular light effects on the message (scrolling, blinking, rolling, panning...). Adjustable effect speed. Vertical or horizontal position possible. Fixed displaying is possible (no effects). Different displays can be synchronised to create longer messages or to create giant advertisements. Special housing available. Power source required: 12 to 28VDC (*not included*).

Part No.	Description	Price
32VK5600R	Moving Message Display	$78.95
32VKB5600	Housing for 32VK5600R	41.15

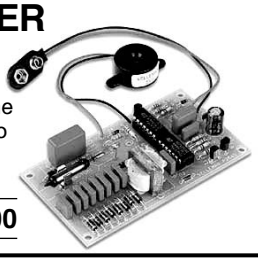
LCD MESSAGE BOARD

- Miniature message board with 16 character 1 line LCD display
- Message scrolls from right to left with adjustable speed
- Applications: At exhibitions, for advertising, to greet visitors at the front door, as name tag
- 46 character message memory
- Possibility to add pauses during scrolling
- Power supply: 2 AAA battery (not incl.)
- **Dimensions:** 3.9" x 1.5" x 1.3"

Part No. 32VKMK157 • Price: $26.50

GEIGER-MULLER COUNTER

This kit provides an acoustic measurement of radiation levels. The sensitivity is at its highest for gamma rays and high energy beta rays. The assembly is compact and may be mounted into a small box, together with the 9V-battery. **Dimensions:** 3.9" x 2.1" x 1.0"



Part No. 32VKK2645 • Price: $190.00

TRANSMITTER-RECEIVER MODULE

- Ideal for remote controls, telemetry
- Stable output

Receiver

SPECIFICATIONS OF TRANSMITTER
—Frequency: 433MHz
—Modulation: ASK
—Circuit Shape: SAW
—Date Rate: 100kbps
—Peak Output Power: 10mW
—Power Supply: 3 ~ 12V DC

SPECIFICATIONS OF RECEIVER
—Range: 220yd in open air
—Frequency: 433MHz
—Modulation: AM
—Sensitivity: 3 Vrms
—Power Supply: 4.5-5.5V DC
—Digital and linear output

Transmitter

Part No.	Description	Price
26VK900-6895	Receiver Module	$9.50
26VK900-6896	Transmitter Module	7.50

ULTRASONIC SENSORS

- Used for motion or distance sensing
- Ideal for robotic applications
- **Size**: 16mm dia., 12mm ht.; **Lead Spacing** 10mm
- **Range** 0–20 ft.; **nominal freq.:** 40KHz; **max input volt:** 20V; **operating temp.:** –4 F to 185F

Part No.	Description	Price
26MA40A5R	Ultrasonic Receiver	$3.95
26MA40A5S	Ultrasonic Sensor	3.95

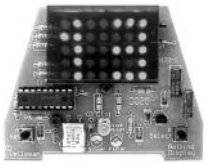
ROLLING MESSAGE

Create your own moving message. 35-LED graphic display. Max. 16 characters. Adjustable scrolling speed. Press "SET" to change a particular character. Press the up or down-key to select a character and end with the "<"-sign. Display standby function: press "Stby" (press RUN to restart). **Dimensions**: 1.8"/3.5" x 2.6"

Part No. 32VKMK124 • Price: $14.95

ROLLING CLOCK

Nicely animated rolling time and date display. Graphic display with 35 LEDs. Select hours, minutes, month or day with SELECT and enter the values with SET. Time display in 12h-mode (24h-mode when setting clock). Fine-tune the clock by turning CV1. **Dimensions**: 1.8"/3.5" x 2.6"



Part No. 32VKMK123 • Price $14.95

TRAFFIC LIGHT

Miniature traffic light as used on four-way junctions. Realistic operation with adjustable delay. 12 LEDs. Great for model railroads, exhibitions, as a toy. **Dimensions:** 2.0" x 1.4" x 4.5"

Part No. 32VKMK131 • Price: $7.90

ROULETTE

- Auto power-off; Low power consumption
- Power supply: 3 AA battery operation *(not incl.)*
- **Dimensions:** 3.6" x 1.3"

Part No. 32VKMK119 • Price: $15.75

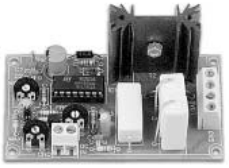
7 SEGMENT DIGITAL CLOCK

- 12/24 hour clock system
- Auto toggle function
- Easy time setting
- Easy wall mounting
- Back up battery
- Temp. readout min. - 20 C / - 4 F max. 70 C / 158 F
- Optional Temp. Sensor sold separately
- Optional 12VAC power Sold separately

Part No.	Description	Price
32VKK8089	Clock Kit	$78.95
32VKK8067	Optional Temp. Sensor	17.90

DC TO PULSE WIDTH MODULATOR

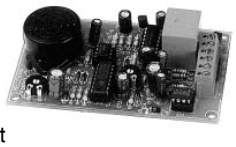
This control circuit is ideal for the accurate control of DC motors, lightening levels, small heaters as well as other applications. The circuit converts a DC voltage into a series of pulses, such that the pulse duration is directly proportional to the value of the DC voltage. The great advantage of such a circuit is that almost no power is lost in the control circuit. Protected against overload and short circuit. **Dimensions:** 3.4" x 1.9" x 1.8"



Part No. 32VKK8004 • Price: $22.95

velleman-kit HIGH-Q ELECTRONIC KITS

CAR ALARM

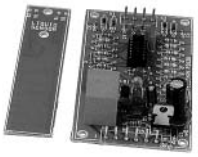


The alarm detects sudden voltage drops of the battery when the interior, trunk, or hood lights are switched on. To ensure correct operation, a number of control indications have been included, such as: flashing LED to indicate that the alarm is in standby mode after a set time (after you have left the car). Pre-alarm (built-in buzzer) to indicate that the alarm is activated, so that you will not forget to switch it off. The alarm is easy to switch on and off, either automatically or by means of the ignition switch or a remote control unit. Power source required: 12V (*not included).*

Intermediate Level

Part No. 32VK3504 • Price: $19.95

LIQUID LEVEL CONTROLLER



Situations such as leaking washing machines, water level dropping in your aquarium, rain tank or water tank suddenly dry or over flowing, water in your cellar, etc., are often the cause of trouble and financial burden. Prevention is better than cure. So use this fluid detector. This multifunctional device is easy to use in a variety of applications:

Intermediate Level

1. LED control of set fluid level: LOW, MIDDLE, HIGH
2. Controller: the relay automatically switches a pump and/or valve to keep the fluid level between the LOW and HIGH marks
3. Alarm: if the sensor detects a level which is too high or too low (selectable), the relay will operate a bell or other alarm device

Part No. 32VK2639 • Price: $24.95

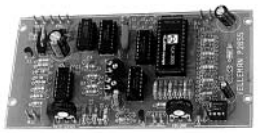
FROST INDICATOR

Drive more safely in freezing weather. This kit uses a flashing LED to indicate a road temperature close to freezing point; below that point the LED is on continuously. A reliable temperature sensor with mounting stud is included. Power source required: 10-15VDC/25mA. (*not included*)

Beginner Level

Part No. 32VK2644 • Price: $14.95

ELECTRONIC WATCHDOG

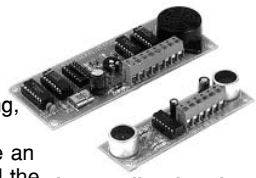


A circuit that produces a natural sounding barking dog with a sensitive "ear" to everything that comes near it. It is a faithful watchdog, which never sleeps and never has to be taken out for a walk. Power source required: 2 x 8VAC or 9-12VDC/ 500mA. (*not included).*

Intermediate Level

Part No. 32VK2655 • Price: $39.95

PARKING RADAR



If you have problems in parking then this kit is for you. Using (ultrasonic) sound waves, whose frequency is beyond our range of hearing, we can "measure" a distance. Consequently, a sensor mounted at the back of the car can give an indication of the distance between your car and the car parked behind you or other obstacles (only at the same height as the sensor). When the preset minimum distance is crossed, an audible signal is generated.

Intermediate Level

Part No. 32VK3502 • Price: $49.95

SOUND-TO LIGHT UNIT

Four high-intensity LEDs light up and react simultaneously on every sound. Applications: sound indicator, simple sound-to-light unit for music, for hearing impaired (can be used to indicate the telephone, doorbell). Adjustable sensitivity with potentiometer. Built in microphone. Power supply: 9V battery (*not included*).

Intermediate Level

Part No. 32VMK103 • Price: $8.95

METRONOME

Incorporated speaker included. LED beat indication. Adjustable volume and beats/minute with potentiometers. On/off switch on board. Power supply: 9V battery (*not included*).

Intermediate Level

Part No. 32VMK106 • Price: $14.95

UNIVERSAL MONO PRE-AMPLIFIER

This kit has been developed as pre-module for a number of audio applications where there is insufficient input signal. Applications as a microphone pre-amplifier or for level correction. Power source required: 10-30VDC/10mA (*not included*).

Intermediate Level

Part No. 32VK1803 • Price: $12.25

UNIVERSAL START/STOP TIMER

Miniature timer for all applications requiring a delay of up to 60 minutes. The control range may be adjusted. Power source required: 15VDC/55mA (*not included)*

Beginner Level

Part No. 32VK2579 • Price: $14.95

WINDSHIELD WIPER CONTROL

Up to 3 different time intervals (2 – 10 – 15 seconds) can be selected for the windshield wipers of your car. It can also be used for automatic slide projection. Instructions/installation manual included for most cars. Power source required: 12-15VDC. (*not included)*

Intermediate Level

Part No. 32VK2599 • Price:$19.95

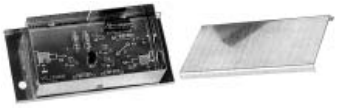
POLICE SIREN

Create or imitate sirens of all kinds by adjusting three trimmers. Powerful sound with an additional 2W amplifier on the PCB. Power source required: 8-14VDC/1A. (*Speaker and power supply not included*).

Beginner Level

Part No. 32VK2604 • Price: $14.95

AM/FM ANTENNA AMPLIFIER

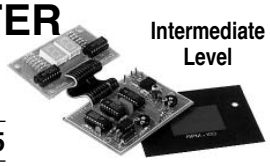


Provides 22dB gain wherever you need it. DC power supply directly or via the coax cable. Metal housing included.

Beginner Level

Part No. 32VK2622 • Price: $14.95

DIGITAL TACHOMETER



For cars or motorcycle with a petrol engine. May be used as a general purpose revolution counter.

Intermediate Level

Part No. 32VK2625 • Price: $39.95

velleman-kit HIGH-Q ELECTRONIC KITS

FLASHING LED'S

BEGINNER LEVEL

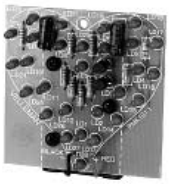
Applications include model construction. Adjust flashing speed with trimpots. 9V battery not included.

Part No. 32VK102 • Price: $3.50

FLASHING HEART

BEGINNER LEVEL

28 LEDs form two blinking hearts. 9V battery not included.



Part No. 32VK101 • Price: $7.50

UNIVERSAL BATTERY CHARGER

Many battery chargers are available on the market, but few of them are universal chargers. using this kit, NiCd and NiMH batteries of different voltages and capacities can be charged both quickly (52 minutes) and normally (14 hours). In order to ensure that the battery is fully discharged prior to charging and thus has a longer life cycle, an automatic discharger is also fitted.

Intermediate Level

Part No. 32VK7300 • Price: $24.95

GUITAR PRE-AMPLIFIER WITH HEADPHONE OUTPUT

An electric guitar cannot be connected to just any amplifier or audio installation. This pre-amplifier has been designed for this purpose and provides you with a headphone output, allowing you to practice without disturbing others. Moreover, it is fitted with a special device for tone adjustment, allowing anyone to create their personal sound. Power source required: 9V battery (*not included*).

Beginner Level

Part No. 32VK4102 • Price: $26.95

REMOTE CONTROL BY TELEPHONE

This kit makes it possible to turn up to three devices on or off over the telephone. It is also possible to check the condition of a switch (open or closed). Example: when you are away on holiday, you may switch the lights on and off from time to time, check the alarm or turn on the heating before returning home. A major advantage of this circuit lies in the fact that audio signals are used to tell whether a specific output has been turned on or off. Operation is protected by a user defined code, which is simply keyed in from the telephone keypad. .

Intermediate Level

Part No. 32VK6501 • Price: $69.95

ELECTRONIC CHRISTMAS TREE

- 16 blinking LEDs
- Very low power consumption: max. 4mA
- Power supply: 9V battery *(not incl.)*
- **Dimensions:** 2.4" x 4.0" x 1.0"

Part No. 32VKMK100 • Price: $7.25

CHRISTMAS TREE SMD VERSION

- Miniature Xmas gadget
- 6 LEDs flash alternately
- Tree can be operated pending (e.g. from the ceiling or Xmas tree) or can be worn as a badge *(pin supplied)*
- Ideal introduction to SMD (Surface Mounted Device) technology
- Some extra parts are supplied, in case some get lost or damaged
- **Dimensions**: 1.75" x 1.6" x 0.3"

Part No. 32VKMK142 • Price: $10.95

3D XMAS TREE

The ultimate Xmas gadget.

FEATURES

- 16 flashing red LEDs
- Extra green and yellow LEDs provided to customize your tree
- Can be hung and supplied through the wires

SPECIFICATIONS

- Low power consumption: 8mA
- Power supply: 9V battery operation *(not incl.)*
- Will operate on 12V DC (e.g. in cars, ...)
- Dimensions: 3.1" x 3.5" x 4.0"

Part No. 32VKMK130 • Price: $7.95

SOUND GENERATOR

The ideal device for DJ's, jingles for radio stations or just to attract attention. With one output for direct connection to a speaker and one line output for connecting to a mixer panel or amplifier. The following effects may be generated directly by means of a push button: machine gun, European siren, phasor gun, racing car with motor howl, screeching of car tires on a curve, explosion, mortar fire followed by explosion, music (wild charge tune or snake charmers tune), US siren. Supply Voltage: 8-10VDC/100mA or 9V battery (*not included*).

Beginner Level

Part No. 32VK4401 • Price: $34.95

MULTI-TONE CHIME

Electronic tones can be generated simply and cheaply using the device. This kit is primarily intended for use as a replacement for the traditional mechanical doorbell. Of course, it can also be used for many other types of applications. The number of tones may be selected up to a maximum of three, each of which is output one after the other. This can be used to help locate the place being called. Volume and tone can also be set. The existing bell transformer can be used as a power supply. Power source required: 6 to 9VAC/0.2A or 4.5V battery (3 x 1.5V) (*not included*)

Beginner Level

Part No. 32VK6600 • Price: $27.95

CODE LOCK

This code lock may be used to switch an alarm (e.g. car alarm K3504) on and off, or to open a door lock. An LED on the operating panel indicates the position of the 'lock'. The code is easy to define. Because the operation panel is completely enclosed, it may be used inside and outside the house. Power source required: 9-15VDC or 8-12VAC (*not included*).

Intermediate Level

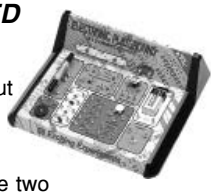
Part No. 32VK6400 • Price: $34.95

ELECTRONIC PROJECT LAB

ELECTRONIC PLAYGROUND 50-IN-1 EXPERIMENTS

NO TOOLS OR SOLDERING REQUIRED

MODEL EP-50



These Electronic Science Labs will teach you about electronics from A to Z. With these all-in one labs, you will learn about electronic parts, how to read schematics and wiring diagrams, all the while building up to 500 different projects. These kits use two quick and easy hook-up methods:

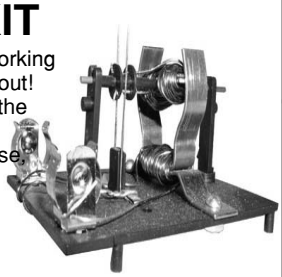
Spring Method: Simply slip pre-cut wires and components into special springs for a safe, secure connection.

Breadboard Method: Featured in our advanced kits, this system is used by professionals and engineers. Just plug the components and wires into the special breadboard socket holes.

- Labs come with all components and wires needed to build each project
- Easy-to-read, illustrated, lab-style manuals
- Ideal for middle schools and high schools
- Requires 9V battery
- **Box Size:** 10 1/4"(H) x 12 3/8" (W) x 3 5/8" (D)

Part No. 32EP50 • Price: $26.95

ELECTRIC MOTOR KIT



- This kit contains all you need to build a working DC motor & learn its parts from the inside out!
- Wind your own armature & field coil; build the commutator with two snap together pieces.
- It includes a 2 copper wire coils, plastic base, field poles, armature core, brushes & fasteners

Part No. 32SM806 • Price: $6.95

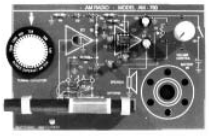
MOTOR ACTION KIT – *NO SOLDERING*

- Safe, no soldering.
- Build an operational motor
- Control clockwise/counter-clockwise rotation via power
- Color mixing with rotating color disc
- Fan using motor and power
- Requires 2 “AA” batteries
- Manual included

Part No. 32MX902M • Price: $11.50

AM RADIO KIT 2 IC’S

MODEL AM-780K



Easy-to-build complete radio on a single PC board. Unique design allows you to place parts over its corresponding symbol on the PC board. Teaches the basic theory of AM radio operation. Detailed instructions and illustrations make it an easy and educationally sound project. Battery (9V) not included.

Part No. 3200AM780K • Price: $12.50

FM WIRELESS MICROPHONE

This kit contains a microphone with a tiny transmitter. It can be easily built in an hour or so. All you need, to receive it, is a standard 88-108MHz FM receiver.

Part No. 32FMWM • Price: $5.50

MR. CIRCUIT I LAB

As a set the product includes a manual, all of the parts necessary to complete thirty different instructional exercises, and a solderless circuit board to make experimentation easy, even for those who have never touched a soldering iron. Students learn electronics theory and the nature of electronic components. In hands-on laboratory adventure they also become familiar with how these components function in 30 interesting electronic circuits.

Part No.	Description	Price
32EKIMR1	Mr Circuit I™ Lab	$28.25/Set
32EKIPK1	Replacement Parts Kits	10.85/set
32EKICB1	Replacement Solderless Breadboards	5.35/ea.

MR. CIRCUIT II LAB

Mr. Circuit II: Digital Magic™ is an inexpensive, effective way of introducing students to digital electronics. Following illustrated lessons and easy-to-follow wiring diagrams, students build working digital circuits on a solderless circuit board. Students learn about binary numbers, digital signals, boolean gates and how digital circuits are designed.

Part No.	Description	Price
32EKIMR2	Mr Circuit II™ Lab	$44.95/Set
32EKIPK2	Replacement Parts Kits	19.65/set
32EKICB2	Large Replacement Solderless Breadboards	8.65/ea.

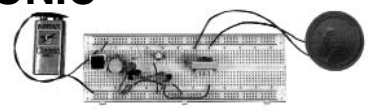
MR. CIRCUIT III LAB

THE LAWS OF DIRECT CURRENT

Mr. Circuit III Lab is available for use with or without Mr. Circuit III Software. The Experiment Guide acts as a lab log as the student completes laboratory exercises that implement the principles learned. Each experiment lists objectives, equipment and procedure while leaving room for the student to record observations and conclusions. Includes the Experiment Guide, parts and equipment needed to explore circuit theory “hands-on".

Part No.	Description	Price
32EKIMR3	Mr. Circuit III with Multimeter	$61.95
32GUIDE3	Additional Experiment Guide	36.95
32EKIPK3	Replacement Parts Kits	9.85
32EKICB2	Large Replacement Solderless Breadboard	8.65

BASIC ELECTRONIC EXPERIMENTS



MODELS PK-101, PK-201

- No soldering required, just add a solderless breadboard and 9V battery.
- Performs 50 experiments including: Electronic keyboard, water alarm, finger touch lamp, siren, metal detector, space gun, burglar alarm, electronic kazoo plus many more.
- Requires breadboard and 9V battery or power source.

PK-201: Same as ***PK-101*** but with computer interface. It turns your PC into an oscilloscope and spectrum analyzer.

Part No.	Description	1-9	10+
32PK101	Basic Electronic Experiments	$19.95	16.95
32PK201	Basic Exp. w/Computer Interface	35.00	33.00
03MB102	830 Contact Breadboard	4.75	4.25
2800RG9	9V Battery	1.30	1.20

CRYSTAL RADIO KIT

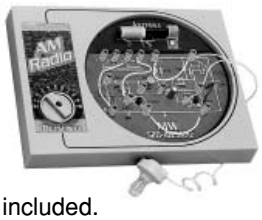
NO SOLDERING

- Safe, no soldering.
- Build an AM radio that works without any batteries or AC
- Crystal diode converts RF to audio
- Earphone included

Part No. 32MX901 • Price $9.95

AM RADIO KIT

NO SOLDERING



- Safe, no soldering.
- Easy-to-read illustrated manual
- Teaches parts identification and how radios work
- Receives AM radio stations. Earphone included.
- 520-1650KHz band reception. Require one 9V battery

Part No. 32MX901A • Price $12.95

SHORT WAVE RADIO KIT

NO SOLDERING

- Safe, no soldering
- Receives short wave radio signals from 6-8 MHz (SW1) and 12-18MHz (SW2)
- Explains how radios work
- Requires a 9V battery
- Safe, no soldering, educational
- Easy-to-read illustrated manual

Part No. 32MX901SW • Price: $14.95

GENERATOR ACTION KIT

NO SOLDERING

- Safe, no soldering.
- Build an operating generator that creates electricity
- Teaches how a generator lights an LED without using batteries
- Easy-to-read illustrated manual

Part No. 32MX902G • Price $9.95

BELL ACTION KIT

NO SOLDERING

- Safe, no soldering.
- Teaches construction and operation of a functioning bell
- Easy-to-read illustrated manual
- Requires 2 “AA” batteries

Part No. 32MX902B • Price: $9.95

300-IN-1 PROJECTS

WITH COMPONENTS

NO SOLDERING

Includes components and panel mounted solderless breadboard. Circuits are created by inserting various components into solderless breadboard and using jumper wires. Components include IC’s, transistors, capacitors, resistors, trimpot, earphone, diodes. Mounted on board are LEDs, 7 segment display, antenna, transformers, speaker, switches, terminals, controls and keys. Well documented 164 page manual describes and instructs on parts, symbols, schematics and general principals. 300 innovative kits ranging from games, lights, sounds, alarms, detectors, timers, logic, testers, temperature, signal generator and tracer and much more.

Part No. 32MX908 • Price: $91.90

ELECTRONIC PROJECT LAB AND LEARNING CENTER

NO SOLDERING

- Build up to 500 different projects
- Learn about electronic parts, how to read schematics, and wiring diagrams
- Save, no soldering. Great for beginners
- **Spring Method:** Simply slip pre-cut wires and components into special springs for a safe, secure connection
- * Build Electronic Siren, LED Strobe Light, Light Dimmer, Sound Amplifier, Winking LED’s, Sound Machine, Pencil Organ, Burglar Alarm, AM Radio Station, Logic Tester, Metal detector
- Requires 6 AA batteries

Part No. 32EP130 • Price $37.50

SOLDERING PROJECT KIT

Good soldering requires practice and an understanding of soldering principles. This kit will help you achieve good soldering techniques, make you familiar with various electronic components and provide you with dynamic results. Requires one 9V battery *(not included).*

Part No. 3200SP1A • Price: $7.50

AM/FM RADIO KIT

NO SOLDERING

- Learn and build you own radio kit
- Tune in your AM/FM radio stations 520–1650KHz band and 88–108MHz band
- Easy-to-read illustrated manual

Part No. 32MX901AF • Price: $18.95

500-IN-ONE ELECTRONIC PROJECT LAB

USES BREADBOARD AND SPRING HOOK-UP METHODS

MODEL MX-909

- No soldering required or AC voltage.
- Everything you need to build 500 exciting electronic projects.
- Learn the basics of electronics and put your knowledge to work creating 500 different electronic experiments, special lighting effects, radio transmitter and receivers, amazing electronic sound effects, cool games and more.
- Includes built-in breadboard for easy wiring and connection of components, and an LCD (Liquid Crystal Display) indicates the information during the experiments in progress.
- Build your knowledge by exploring amplifiers, analog and digital circuits plus how to read schematic diagrams.
- Includes transistors, transformers, diodes, resistors, capacitors, phototransistors, CDs, integrated circuits, speaker, earphone, LEDs, LED digit display.
- Fact-filled, illustrated, lab-style manual included.
- Requires 6 "AA" batteries.

Part No. 32MX909 • Price: $224.00

ELENCO™ SNAP CIRCUITS™ EDUCATIONAL KITS

Sample Screen of Computer Experiment

Deluxe Model SC-300S

Snap Circuit™ Kits make learning electronics a "snap". Follow the colorful pictures in the manual to build many projects such as AM radios, burglar alarms, flashlights, doorbells and play electronic games

- No tools required.
- Uses "AA" batteries. *(Not included)*

Snap Circuits Jr.™

— Contains over 30 parts
— Build over 100 experiments

SC-300S deluxe version

— 300 projects plus 20 bonus experiments
20 bonus experiments enable learning about and using an oscilloscope and spectrum analyzer via your windows based PC
— Contains over 60 parts that are mounted on plastic modules and snap together with ease.
— Comes with all the interface parts you need and the software. Great for introducing electronics through a computer.

SC-300 Standard Version

— Same as SC-300S but without bonus experiments and PC interface
— 300 experiment

SC-500 PRO

— Build over 500 projects with more than 75 parts with PC interface
— Including recording IC, FM Module, Analog Meter etc.

SC-750- EXTREME

— Build over 750 projects with more than 80 parts with PC interface

Part No.	Description	Price
32SCJR	Model SC-100 - Snap Circuits Jr.	26.50
32SCDELUXE	Model SC300S - Deluxe Version	$53.00
32SCSTANDARD	Model SC300 - Standard Version	42.95
32SC500	Model SC500 - PRO	59.95
32SC750	Model SC750 - Extreme	82.95

75-IN-1 ELECTRONICS EXPERIMENTS

NO SOLDERING

- Great introduction to electronics.
- Hours of fun while learning the basics.
- No tools or soldering required.
- Fact-filled illustrated manual included.
- Spring coil connections.
- Everything you need to build an electronic organ, timer buzzer, motion detector, burglar alarm, water level alarm and more.

Part No. 32MX905 • Price: $34.90

ELENCO™ SNAP CIRCUITS™ EDUCATIONAL KITS

MUSICAL RECORDER
MODEL SCP-01
Records up to 8 seconds, play music after recording, easy to build.

SCP-01

MINI FM RADIO
MODEL SCP-02
Easy to build this FM radio.

SCP-02

MINI MOTION DETECTOR
MODEL SCP-03
Whenever somebody walks in front of Motion Detector, the sound of a laser comes out of the speaker and a red light flashes.

SCP-03

MINI SPACE BATTLE
MODEL SCP-05
Exciting space battle sound effects, laser ray and explosion sound effects.

SCP-05

MINI FLYING SAUCER
MODEL SCP-06
Press and release the switch and watch saucer rise into air.

SCP-06

MINI RC ROVER
MODEL SCROV-10
Build your own RC Snap Rover using colorful snap circuits. You will be able to navigate your surroundings with easy-to-use Snap Rover remote control.

SCROV-10

Part No.	Description	1-9	10+
32SCP01	Musical Recorder	$21.75	$20.75
32SCP02	Mini FM Radio	21.75	20.75
32SCP03	Mini Motion Detector	21.75	20.75
32SCP06	Mini Flying Saucer	14.90	14.20
32SCROV10	RC Snap Rover	63.50	60.50

ELENCO™ SNAP CIRCUITS TRAINING PROGRAM

• In-depth explanation of electronic components. Ideal for use in home schooling, middle school and high school

MODEL NO. SC-300R

Build over 300 projects. Project books, student guide and teacher guide with a case included.

MODEL NO. SC-500R

Build over 500 projects. Project books, student guide and teacher guide with a case included.

MODEL NO. SC-750R

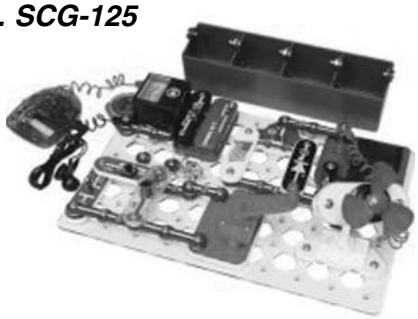
Build over 750 projects. Project books, student guide and teacher guide with a case included.

Part No.	Description	Price
32TRPSC300R	Model # SC-300R	$66.95
32TRPSC500R	Model # SC-500R	$97.95
32TRPSC750R	Model # SC-750R	$124.95

ELENCO™ SNAP CIRCUITS

ALTERNATIVE ENERGY KIT

MODEL NO. SCG-125



Learn about energy sources and how to "think green." Build over 125 projects. Includes full-color manual, explains all forms of environmentally - friendly energy including: geothermal, fuel cells, wind, solar, and tidal. Contains over 40 parts.

Part # 32SCG125 • Price: $44.95

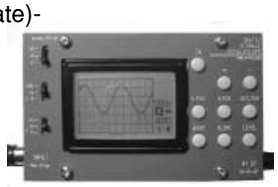
DIGITAL OSCILLOSCOPE

SMALL PORTABLE 1 CHANNEL 1MHZ / 10 MHZ

Models: DSO 062, DSO 082

Features

- 1MHz bandwidth (5 Ms/s sampling rate)- Model-DSO 062
- 10 MHz Bandwidth (50Ms/s sampling rate) - Model-DSO 082
- 100 mv/div. to 5V/div. sensitivity - Model-DSO 062
- 10mv/div. to 5V/div. sensitivity - Model-DSO 082
- 50V peak to peak max. input
- DC/AC coupling
- Probe and adaptor included
- Save / recall up to 4 captures
- FFT with selectable points (Model-DSO 082)
- **Size:** 5" x 2.7" x 1.2"; **Wt**. 5 oz. (DS082)
- **Size:** 4.3" x 2.6" x 1" **Wt**. 4.5 oz. (DS062)



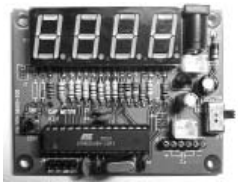
DS 062

DS 082

Part No.	Description	Price
01DS062	DS062 - 1MHz Oscilloscope	69.95
01DS082	DS082 - 10MHz Oscilloscope	125.00

CAPACITANCE METER KIT

You will have your own capacitance meter after successful completion of this project.

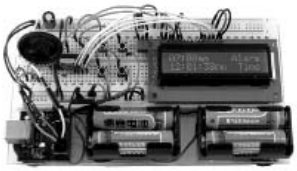


- Range: 1pf – 500 F
- About 1% accuracy
- Automatic range switch
- Zeroing available
- Real time serial output of measurement read-outs with time stamp
- Low cost and easy to build
- 8 to 16V DC power supply required *(but not included)*
- **Size:** 3" x 2.3" x 0.6"; **Wt:** 1.5 oz.

Part No.	Description	Price
32JYE06001	Cap. Kit	$13.95
32JYE06002	Cap. Meter Assembled	15.95
16D9500MA	9V DC Adapter	4.75

LCD TRAINER KIT

Liquid crystal displays are used in everything from mobile phones and TV's to robots. This trainer kit gives students hands on experience. A high quality instruction manual with step by step colour photos teaches students how to connect a common LCD to a processor and program it using free software from the internet. The basic kit comes with everything required for students to display messages, detect objects and build a working alarm clock.



Part No. 3200LCDTKIT • Price: $58.95

RSR 1000-T
PORTABLE LAB STATION

The RSR 1000-T Lab Station provides the user with a completely self-contained portable lab set-up featuring the most commonly used test equipment and tools.

FULL 2 YEAR WARRANTY
Any tool or component in this kit found to be defective will be replaced up to 2 full years from the date of purchase.
ELECTRONIX EXPRESS

$255.00

PAD-234
ANALOG/DIGITAL TRAINER

Analog/Digital Trainer with onboard power supplies to facilitate the breadboarding of both analog and digital circuits.

Modular design permits ease of assembly and diagnostics. Printed circuit boards are interconnected by compact connector assemblies. Troubleshooting is simplified by conveniently accessible test point jacks.

FTB
FIELD TECHNICIAN'S CASE

- Anodized aluminum texture finish
- Removable tool pallet with 17 pockets
- 18" long x 13" wide x 7" high

DM717
MULTIMETER

- Full featured DMM
- Hfe and capacitance checker
- Audible continuity checker

610-B
LOGIC PROBE

- TTL/CMOS compatible
- 20 - MHz logic tester, Hi/Lo and pulse memory

SCIENTIFIC CALCULATOR

- Standard scientific functions
- Binary, octal, hexadecimal calculations
- Statistical functions

TOOLS AND ACCESSORIES:

- Long Nose Pliers
- Diagonal Cutter
- Wire Stripper
- Soldering Iron
- Heavy Duty Soldering Iron Stand
- Desolder Vacuum Pump
- 3 pc. Screwdriver Set
- 3 pc. Nut Driver Set
- 4 pc. Precision Screwdriver Set
- 4 pc. Solder Aid Set
- IC Extractor
- 10 - gm Solder Pack
- Desolder Wick
- Oscilloscope Probe (IC Clip)
- Oscilloscope Probe (Alligator)
- 10 pc. Alligator-to-Alligator Lead Set
- 2 pc. Banana-to-Alligator Lead Set
- 2 pc. Banana-to-Banana Lead Set

Part No.	Prices
32RSR1000TK (PAD 234 Kit)	$255.00
32RSR1000TA (PAD 234 Assembled)	295.00

PAD 234 Kit is Available in 3 Modules

PAD 234 SPECIFICATIONS

± Variable Power supply
1 amp output current, short circuit and thermally protected.
+ 5 Volt Power supply
1 amp output current, short circuit and thermally protected.
12.6 VCT AC
Supply Voltage:
Function Generator:
Sine, square, triangular buffered outputs, amplitude variable (10Vp-p maximum), frequency adjustable in 5 ranges from 1 to 100 Khz.
Clock output:
Rise and fall times exceed 400 nanoseconds.
Breadboards:
2 breadboards, each with 840 plug-in tie points.
Indicators:
8 LED indicators, buffered and TTL compatible.
Logic switches:
8 binary miniature SPDT toggle switches to switch either 0-V or +5V.
Power Consumption:
117 VAC @ 0.5 amp.
Additional Features:
3 wire grounded line cord, fuse protected AC line, modular construction, anodized and screened aluminum top panel with aluminum side support brackets.

RSR

PAD-234 – DIGITAL / ANALOG TRAINER

NEW MODIFIED DESIGN

The PAD-234 Digital/Analog Trainer is a complete portable work-station. It is designed to allow you to quickly build, modify, and troubleshoot all sorts of analog and digital circuits. Its built-in power supplies, signal sources, and I/O features can save hundreds of dollars when compared to using separate pieces of lab equipment. For expanded capability the supplies, signals, and I/O, along with uncommitted lines, are available at a built-in IDC connector to allow ribbon cable connection to other boards, devices, or pieces of equipment.

The PAD-234 is a rugged, high-quality piece of equipment designed for years of use with minimal maintenance. It's functionality and low cost make the PAD-234 a cost-effective design tool for hobbyists and professionals. The same features make it the ideal educational tool for student use. The modular design of the PAD-234 allows it to be incorporated in kit form into progressive quarters of a school's instructional program. Available assembled or in kit form.

FUNCTION GENERATOR:
- Sine, square and triangular buffered outputs
- Amplitude 10V p-p output 5 frequency ranges 1-100KHz
- DC offset adjust

DIGITAL I/O:
- 8 buffered LED indicators
- 8 SPDT toggle switches 0-5V
- 2 debounced momentary switches 0-5V
- Normally Hi and normally Lo levels both available
- TTL level clock slaved to generator: 0-5V, risetime < 400nsec

ADDITIONAL FEATURES:
- 2 breadboards, each with 840 plug-in tie points
- Option to make breadboard moveable.
- Power supplies, function generator, and digital I/O available at built-in IDC connector
- High-impact plastic carrying case
- 3-wire fuse-protected line cord
- 5-way binding posts for power supplies & generator
- Input voltage 110VAC 50–60 cycles

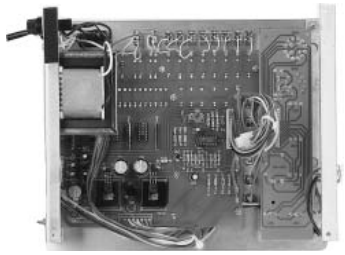
SPECIFICATIONS:
5V Fixed Power Supply
+/- 12V Fixed Power Supplies
+/- 15V Variable Power Supplies
• Output current 1 AMP DC each
• Shortcircuit protected
• 12.6V AC CT Power Supply

Clean Streamlined Interior

- ***Compact Design on 2 PC Boards***
- ***Neat, Efficient Wiring***
- ***Sturdy Connectors***

Part No. 01PAD234K • Price: $115.00
KIT FORM

Part No. 01PAD234A • Price: $155.00
ASSEMBLED

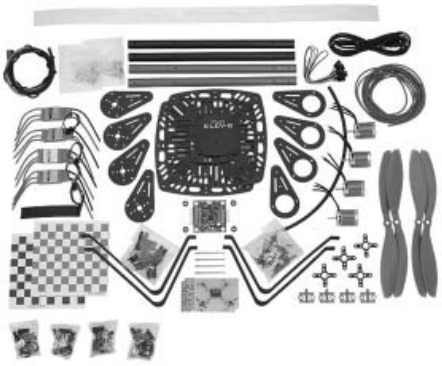


PARALLAX ELEV-8 QUADCOPTER

The ELEV-8 quadcopter is a flying robotic platform that is lifted and propelled by four fixed rotors. There are no fixed wings; all of the lift is created from the rotors. Unlike standard helicopters a quadcopter uses fixed-pitch blades, whose rotor pitch does not vary as the blades rotate; control of vehicle motion is achieved by varying the relative speed of each rotor to change the thrust and torque produced by each.

The quadcopter uses a HoverFly board with a Propeller multicore microprocessor to electronically control stabilization of the aircraft. The benefits to this system are a stable platform, with no mechanical linkages for a small maneuverable and agile aircraft.

The kit provides an inexpensive way to get involved in the quadcopter arena. The kit includes; frame, mounting hardware, motors, speed controllers, propellers and the control board for flight stabilization. (the only thing you need to provide is the RC radio equipment, battery). We recommend a six channel RC radio.



- Open under body for camera mounting options
- Open Source; design files available online
- Highly modifiable, for custom additions
- Modular frame for fast repair
- Protective motor mounts
- Can fly with added payloads up to 2 lbs

Part # 32PX80000 • Price: $595.00

PLAYFUL ROBOT PUPPY KIT

This kit comes with all parts except batteries. The controller comes with an ATmega8 but this is easily upgradeable if required. The sample code provided allows the puppy to sit, shake hands, lie down, beg and walk on it's hind legs. This robot is fully interactive and is controlled by hand gestures. The robot works best with a 7.4V 2300mAH battery as shown in the videos but it can also work with 6x NiMh AA batteries in a 3x2 battery holder.

- Arduinocompatible for easy programming
- Controller comes with an ATmega8 (easily upgradeable)
- No soldering is required

Part # 01PRKIT • Price: $155.00

DESIGNER SWITCH ASSORTMENT

15% savings over our already low every-day pricing. Fantastic assortment from our regular inventory, not surplus. A great way to try our most popular types of switches before ordering in quantity, or to get a nice prototyping supply very economically. Perfect for the classroom. Commonly used with Arduino and many other projects. Your option on packaging can further save money. Available in a ziplock bag, or for a few dollars more in a durable, adjustable polypropylene component storage case.

- Normally open push button, red top
- Norm open push button, black
- Mini toggle SPDT
- Tact switch, momentary, 1.5mm button ht
- Illuminated pushbutton, dual-in-line mount
- Mini slide SPST
- Standard (bigger) slide, SPDT center off
- Breadboard compatible slide SPDT
- Mini slide DPDT
- DIP switch, 8 position
- Magnetic reed switch
- Tilt (rollerball) switch
- Limit/snap/micro switch solder lug terminals
- Limit/snap/micro switch PC leads
- Mini toggle, SPST PC leads
- Mini toggle, DPDT solder lug leads
- Mini toggle, SPST solder lug leads
- Tact switch momentary, 5mm button height
- Right angle momentary SPDT PC leads
- Standard (bigger) toggle SPST

Part No.	Description	Price
32SWITCHBAG	20 piece switch ass't in ziplock bag	$15.95
32SWITCHCASE	20 piece switch ass't in component storage case	19.20

ROBOTIC ARM WITH 6 DEGREES OF FREEDOM

6 Degrees of Freedom Robotic Arm is made from 3mm thick aluminum sheet and uses 4x D servos for the base and the arm. The 2x micro servos operate the wrist and gripper. A serial interface and PC software is included. Since the arm has a few joints, we can imagine our human arm.

- 6 Degrees of freedom robotic arm
- Length: 390mm
- Made from 3mm thick aluminum sheet
- Wonderful mechanical structure, and control system
- A serial interface and PC software included
- Suitable for individual development and school competition
- Requires an external 4.5V to 6V power supply for the servomotors

Part # 01RA001 • Price: $256.00

RSR BASIC PROTOTYPING PARTS KIT

ONLY **$48.95**

PORTABLE PLASTIC PARTS CONTAINER
10 1/2 x 6 1/2 x 1 1/2; flexible division polypropylene

RESISTORS: 1/4W – 5 each
10 ohm, 100 ohm, 470 ohm, 1K, 2.2K, 4.7K, 10K, 27K, 47K, 100K, 220K, 330K, 470K, 1M

CAPACITORS: 50V Radial Electrolytics – 2 each
1 f, 4.7 f, 10 f, 47 f, 100 f, 470 f, 1000 f

CAPACITORS: 100V Radial DIP Mylar – 2 each
.001 f, .0047 f, .01 f, .047 f, .1 f, .33 f

CAPACITORS: 500V Ceramic Discs – 3 each
2.2pf, 4.7pf, 10pf, 15pf, 22pf, 47pf, 100pf, 220pf, 470pf, 680pf

INDUCTORS: 1 each
4.7 h, 10 h, 47 h, 100 h, 470 h, 1mh, 10mh, 33mh

TRIMPOTS: Single Turn Cermet – 1 each
500 ohm, 1K, 5K, 50K, 100K, 500K, 1M

SWITCHES: 2 each
SPDT Toggle; N.O. Pushbutton; SPDT slide, 8-Position DIP

LEDs: Standard T 1 3/4 size – 10 each
Red, Green, Yellow

DISPLAYS: 2 each
7-Segment Common Cathode; 7-Segment Common Anode;

INTEGRATED CIRCUITS: 2 each
7805, 7812 Regulators, LM386 Audio Amp, 555 Timer, 741 Op Amp, 74LS00, 74LS02, 74LS08, 74LS10, 74LS47, 74LS74, 74LS86, CD4013, CD4017

TRANSISTORS: 2 each
PN2222, PN2907, 2N3055, 2N3904, 2N3906, 2N5457

DIODES: 2 each
1N4148, 1N4001, 1N34, 1N4728, 1N4733, 1N4739, 1N4743, 1N4747

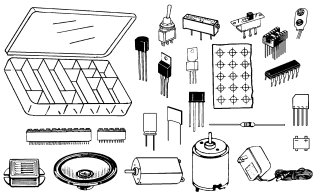
IC SOCKETS: Low Profile – 2 each
8-pin, 14-pin, 16-pin, 24-pin, 40-pin

MISCELLANEOUS:
25' 22AWG Hook-Up Wire, Alligator Lead Sets (Red & Black), 5V DIP Relay, Photo Cell, Electret Mike, Binding Posts (Red & Black), Tip Jacks (Red & Black), Heat Sinks (TO-5 & TO-18), 1.5 Amp 100V bridge, 4 Amp 200V SCR

LARGE STORAGE CABINET: ***(Additional Option)***
Parts Storage Cabinet, 11 1/4" x 12" x 6" – 30 drawers

Part No.	Description	Price
32BPPK	Prototyping Parts Kit	$48.95
061130	Large Storage Cabinet	38.98

RSR BASIC PROTOTYPING PARTS KIT II



ONLY **$49.95**

PORTABLE PLASTIC PARTS CONTAINER
10 1/2 x 6 1/2 x 1 1/2; flexible division polypropylene

RESISTORS: 1/4W – 5 each
220 ohm, 470 ohm, 680 ohm, 1.5K, 3.3K, 6,8K, 15K, 33K, 56K, 68K, 150K, 270K, 390K, 560K, 2.2M

CAPACITORS: Radial Electrolytics – 2 each
2.2 F, 22 F, 33 F, 220 F, 330 F, 2,200 F

CAPACITORS: 100V Radial DIP Mylar – 5 each
470pF, .001 F, .0022 F, .0033 F, .0047 F, .0068 F

CAPACITORS: 100V Radial DIP Mylar – 2 each
.01 F, .022 F, .033 F, .068 F, .22 F, .47 F

TRIMPOTS: Multi-Turn, Precision Bourns 3006P Series Style – 1 each
100Ω, 200Ω, 2K, 10K, 20K, 1M

POTENTIOMETERS: 2 each of following
1.5 K ohm panel mount 1/2W with 3/8" shaft, solder lug terminals
10K panel mount 1/2W with 1" shaft, solder lug ternimals
100K PC mount with 1: shaft

IC SOCKETS: Wire Wrap Sockets – 1 each
8 pin, 14 pin, 16 pin, 24 pin, 40 pin

PERF BOARDS: 1 each of following
3" x 4.5" (29 x 44 holes) and 4.5" x 6.5" (44 x 64 holes)

INTEGRATED CIRCUITS: 1 each of following
7905, 7912 (regulators), LM380 audio amp, 556 dual timer, 1458 dual comp. op amp, LM324 low power quad op amp, 74LS04, 74LS20, 74LS32, 74LS90, 74LS174, CD4001, CD4011, CD4071, CD4511

TRANSISTORS: 2 each
MPSA20, PN3638, TIP31, TIP32, 2N4401, 2N4402

SCR, TRIAC, DIAC, BRIDGES: 2 each
2N5060 SCR, Q200E3 Triac, ST2 Diac, 1A 100V DIP bridge rectifier, 4A 100V bridge

LED'S:
Bi-Polar (2 each), Rectangular red (10 each), mini 3mm red, green and yellow (10 of each color), 2 each 7 segment Display (08NSN584), 1 each bar graphs red (08DC10IDA), green (08DC10GDA) yellow (08DC10YDA)

SWITCHES: 2 each
SPDT center off toggle, DPDT slide

MISCELLANEOUS:
AC to DC wall plug adaptor, buzzer, speaker, DC motors (2 different voltages), 9V battery snap

Part No. 32BPK2 • Price: $49.95

Pomona Electronics DIE CAST BOXES

WITH COVER

SIZE A: 1.13" X 1.50"

SIZE B: 1.38" X 2.25"

Ideal for circuitry prototyping. Securely seal signal sensitive cables and wires.

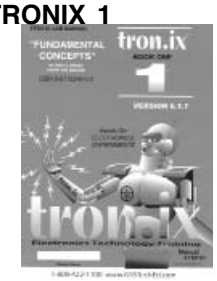
Part No.	Size	Connectors	Price
033753	A	—	$7.95
033751	A	BNC (F) to BNC (F)	27.95
033752	A	BNC (F) to BNC (M)	25.95
032417	B	—	7.25
033230	B	BNC (F) to BNC (F)	21.35
033231	B	BNC (F) to BNC (M)	25.95

EDUCATIONAL KITS

LAB MANUALS

HANDS-ON ELECTRONICS EXPERIMENTS

BOOK ONE - TM101 MANUAL FOR TRONIX 1



FUNDAMENTAL CONCEPTS

- Explains exactly what each component does
- Clear instructions for each lesson
- 40 interesting "no-soldering" experiments
- Enhances understanding of components and circuits
- Provides great base for further skills and knowledge
- Components sold separately

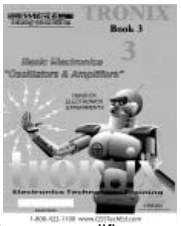
BOOK TWO - TM202 MANUAL FOR TRONIX 2

BASIC DIGITAL CONCEPTS

- 39 digital related "no-soldering" experiments
- Perfect for classroom
- Discusses digital terminology
- Understanding digital vs. analog
- Wide ranging coverage of gates, timers, counters, displays and much more
- Create popular circuits such as "touch-activated switch", "yes/no/maybe"
- Decision maker, "logic probe" circuit, UP-DOWN counter and much more
- Components sold separately

BOOK THREE - TM303 MANUAL FOR TRONIX 3

OSCILLATORS & AMPLIFIERS



- Step-by-step instructions and clear explanatory detail
- 5 Lab Lessons and Experiments
- Covers Applications, transistors in oscillators, tubes, transistors as amplifiers,
- audio amplifier systems
- All solderless breadboard experiments
- Components sold separately

ELECTRONICS MERIT BADGE WORKBOOK

- Written specifically to help scouts be awarded their merit badge
- Follows Electronics Merit Badge requirements exactly
- Includes worksheet check list and counselor sign-offs to track progress
- Contains some projects which require some light soldering and testing. an inexpensive package containing a soldering iron, stand, solder and digital multimeter is available under part #32BBKITTK.
- Contains 060512 solder iron, model 820B digital multimeter, solder pack 060700 and solder stand 060840
- Components, solder projects, solder iron/solder & meter sold separately

Part No.	Description	Price
31TM101	Tronix 1 Experiment Book	$ 19.95
31TM202	Tronix 2 Experiment Book	$ 19.95
31TM303	Tronix 3 Experiment Book	$ 19.95
31TMB01	Tronix Merit Badge Book	$ 19.95
32BBKITTK	Solder tools, Supplies, Meter	$ 12.70

TRON.IX LABS (1, 2, & 3)

- **Cool experiments and lessons**
- **Kits complete with books and parts**
- **Classroom friendly, no soldering required**

TRONIX 1 LAB – Fundamental Concepts "Electronics for Robotics" Lab

40 great experiments to learn basic electronics fundamentals quickly. Well written and perfectly illustrated manual for hands-on labs. Build over 40 really interesting experiments and circuits. Teaches how various components function, such as resistors, pots, photocells, caps, speakers, semiconductors, etc. Just of few of the experimental circuits include burgler alarm, variable speed lights, police siren, moisture detector, morse code oscillator, insanity alarm game, electronic organ and more. Basic electronics lessons include Ohm's Law, Resistors in Series and Parallel, Voltage Measurement and more. Complete with everything needed including battery and manual.

Part No.	Description	Price
32TRONIXLAB1	Tronix 1 Lab complete kit Fundamental Concepts Electronics for Robotics Lab	$28.25

TRONIX 2 LAB – Basic Digital Concepts and Op Amps Lab

39 lessons and hands-on experiments to introduce digital electronics to students, technicians and robotics enthusiasts. Each experiment is complete with a lesson showing drawings and diagrams explaining the concepts of digital electronics. Covers CMOS and linear Op Amp IC's, gates, flip-flops, schmitt triggers, shift registers and more. Circuits to build and experiments include Logic, Counters, Digital Read-Outs, Chaser Lights, Light Activated Counter and more. Complete with everything needed including battery and manual.

Part No.	Description	Price
32TRONIXLAB2	Tronix 2 Lab complete kit Basic Digital Concepts and Op Amps Lab	$44.95

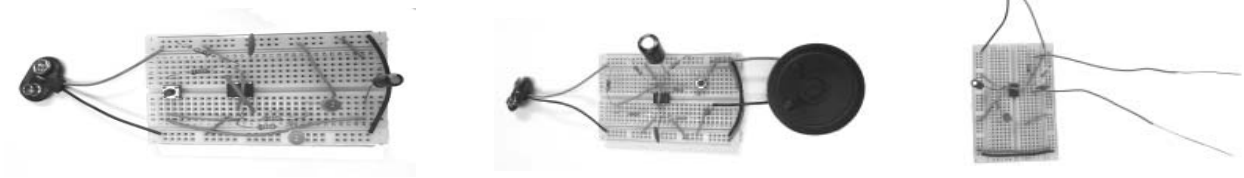
TRONIX 3 LAB – Basic Electronics Oscillators and Amplifiers Lab

95 page illustrated manual instructs hands-on-style exactly how basic electronics oscillators and ampliers work. Create all kinds of sound and light displays. Covers Transistors as Amplifiers, Audio Amplifying Systems, Transistors in Oscillators and Oscillator Applications. Even includes Vacuum Tube theory. Question and Answer section in each lesson. Complete with everything needed including battery and manual.

Part No.	Description	Price
32TRONIXLAB3	Tronix 3 Lab complete kit Basic Electronics Oscillators and Amplifiers Lab	$39.95

ELECTRONIC KITS- NO SOLDER,BATTERY OPERATED

Safe! Fun! Educational! Complete with solderless breadboard, components, schematic and breadboard layout. 9V battery not included



NIGHT LIGHT KIT

The Night Lite kit uses a photocell to turn on and off LEDs. This kit teaches students the principles behind photocell technology

Part No. 3200NLK • Price: $4.50

HEADS OR TAILS KIT

In the Head or Tails game when the button is pressed, LEDs light up to indicate Heads or Tails. The objective of the kit is to show how a clock circuit works in digital electronics.

Part No. 3200HDTL • Price: $4.50

VOICE CONTROL SWITCH KIT

This Circuit is designed to produce an audio (voice) signal that is switch-controlled. The circuit utilizes a relay, transistors, and a microphone that picks up the audio signal. The audio signal in turn activates the relay which generates an eletrical signal that turns an LED on or off.

Part No. 3200VCSK • Price: $4.75

VOICE CHANGER KIT

The Voice Changer kit enables the user to change the tone of his/her voice. The tone frequency in the circuit can be adjusted up or down to affect the tone change of ones voice.

Part No. 3200VCHANG • Price: $5.50

SIGNAL GENERATOR

The Signal Generator kit output sine wave, triangle, and square waveforms. The signal frequency is about 1 kHz.

Part No. 3200SGEN • Price: $5.50

MOISTURE DETECTOR

The Moisture Detector kit utilizes a 555 timer IC circuit to detect high or low moisture levels in soil. The rate of flash of an LED indicates moisture level..

Part No. 3200SGEN • Price: $5.50

WATER DETECTOR

The Water Detector kit uses a 555 timer IC to generate a tone when water or moisture is detected

Part No. 3200MOSDET • Price: $4.50

LIE DETECTOR KIT

The circuit for the lie detector is a two-transistor oscillator. The objective of the ikit is to detect small changes in skin resistance, moisture, tension etc. that will cause the emitted frequency to change.

Part No. 3200LEDET • Price: $4.50

REACTION TESTER KIT

The Reaction Tester is based around the 555 timer IC. The kit is designed to test and expand one's sense of timing. The students need to synchronize their reaction time to press the button in time to keep the LED lit or else it goes out.

Part No. 3200RATSK • Price: $4.50

SIREN ALARM KIT

The Siren Alarm kit uses a 555 timer IC circuit to generate a high pitch siren or alarm sound.

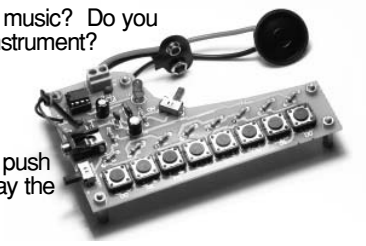
Part No. 3200PSSRN • Price: $4.95

FUN LIGHT KIT

Lights move left to right one at a time or in groups. Movement speed can also be controlled.

Part No. 3200FNLTKT • Price: $4.50

ELECTRONIC PIANO KIT



Do you enjoy listening to classical music? Do you have the skills to play a musical instrument?

Have hours of fun learning to play musical tunes on the Electronic Piano. The Electronic Piano kit features an 8 ohm speaker and 8 push button switches where you can play the musical scale:

"Do, Re, Mi, Fa, Sol, La, Si, Do".

Also you can change the pitch of the tune by using the Frequency Range switch. This is an intermediate level soldering kit that contains all component parts for you to successful build your own Electronic Piano. You might even discover your hidden musical talent! A 9V battery is required for operation, optional 9V/400mA wall adapter available. (Not included)

Part No. 32PMW270032 • Price: $7.95

COLORFUL FLASHING CHRISTMAS TREE KIT

Bring the magic of the holiday season into full view with this Flashing Christmas Tree kit. This kit will thrill both beginner and hobby enthusiasts. This is a very simple circuit with big fun. Twelve LEDs, from L1 to L12 flash in brilliant color and in a random pattern. Assembly is required and all component parts are included. A 9V battery is required, optional 9V/400mA wall adapter available. (Not included)

Part No. 32PMW270014 • Price: $7.50

COLORFUL FLASHING STAR KIT

The Colorful Flashing Star kit is an intermediate level soldering kit. Impress both your family and friends in soldering this kit together. This simple circuit features 20 RGB flashing LEDs – the LEDs from L1 to L20 flash in brilliant changing colors and in a random pattern. All component parts are included with the Colorful Flashing Star kit. A 9V battery is required, optional 9V/400mA wall adapter available. (Not included)

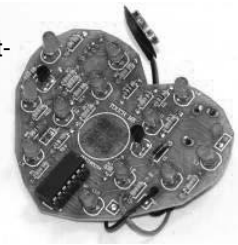
Part No. 32PMW270026 • Price: $8.90

OPTIONAL WALL POWER ADAPTER

- Input: 120 – 240VAC / 60Hz
- Output: 9V / 400mA
- 1/8" mono male plug, center positive

Part No. 16DPMW270013 • Price: $5.95

EMOTIONAL HEART KIT

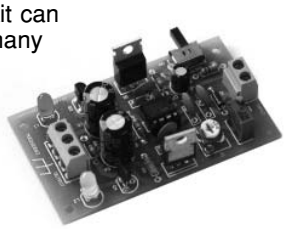


The Emotional Heart kit is a beginner soldering kit. This kit contains a heart-shaped pcb and 12 red LEDs that flash in a random pattern. A unique and interesting feature is in the center of the heart where the user can touch the board to increase the flashing rate of the LEDs.

This kit would be a fun kit to play as a game. You can simulate the finger of a girl touching the heart of a boy and see the flashing rate of the LEDs speed up. All component parts are included with the kit. A 9V battery is required, optional 9V/400mA wall adapter available. (Not included)

Part No. 32PMW270018 • Price: $7.95

DUAL RAIL VARIABLE DC POWER SUPPLY KIT



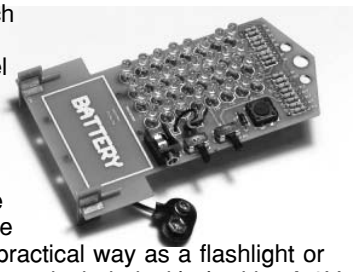
This intermediate level soldering kit can be useful as a power source for many electronic circuits. All component parts are included with the kit. Input DC +3 to +15V

Features:

- Wide power supply range:
- Single supply, 3V to 32V
- Or dual supplies, +/- 1.5V to +/- 16V
- Two independent, high gain internally frequency op amps
- Positive and negative variable dc power supply
- Two adjustable potentiometers
- Input and output terminal blocks
- On / off switch
- Board dimensions: 3"(L) x 1.75"(W)

Part No. 32PMW270037 • Price: $7.50

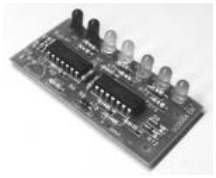
LED LAMP WITH THREE SWITCH CONTROL



This LED Lamp with three switch control is a very simple LED lamp kit. This intermediate level soldering kit features 32 super bright white LEDs, 16 resistors, a diode, and three switches. The user can turn on the LEDs in three different ways using the control switches. In addition, the LED lamp kit can be used in a practical way as a flashlight or night light. All component parts are included with the kit. A 9V battery is required, optional 9V/400mA wall adapter available. (Not included)

Part No. 32PMW270033 • Price: $8.50

DC VOLTAGE MONITOR



If battery status is important, you need this kit. This kit uses 7 LEDs; monitor 12v DC, 1v, 1/2v, or 1/4v steps. Monitor 8v or 5 v in 1/4 v steps. Great for boats, motor homes, model planes or racing car ni-cads. All parts and instruction are included. Size: 1.3" x 2.7".

Part No. 31ERVM1 • Price $7.75

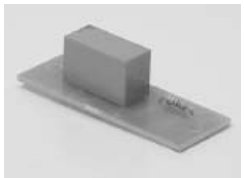
CABLE FILTER KIT

Multi-pole four stage notch filter eliminates picture distortion and the annoying "beep..beep" found on premium cable channels between 2 and 22. Connect between incoming cable or convertor and TV/VCR. Works with or without a cable converter. Can be used on standard 75 ohm antenna systems to remove any single channel (requires 2 filters). This kit sold for educational purposes only. Requires permission of local cable co. to use.

Part No. 31ERDF222 • Price $14.75

RELAY POWER KIT

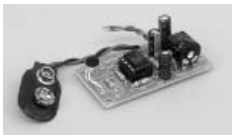
INCREASE THE OUTPUT OF ANY KIT FROM 100 MA TO 3 AMPS



If you need to switch more power, up to 300 Watts, with the Light Genie, Temperature Genie, Timer or Vox kits, use the Relay Kit. We supply a two pole relay 1.5 Amps ea. Tie both poles together and get 3 Amps. Size .75" x 2".

Part No. 31ERRP1 • Price: $9.75

SUPER BIG EAR AMP



Listen through walls, hear conversations across the room. Add a parabolic reflector and hear blocks away. The BIG EAR can be hidden about anywhere. Makes an ultra sensitive intercom. Can also be used as a 1.5W AMP. We supply a mini-electret mike in the kit. Power requirement 6 to 12v DC. Size: 1.75" x 1".

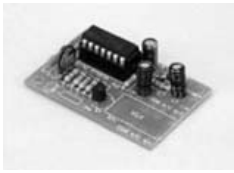
Part No. 31ERAA1 • Price $10.50

LIE DETECTOR

This kit can be great fun at parties. Lie and an audible tone will change. The more you lie the louder the tone. When you lie your hands sweat. This kit allows you to measure these changes; only a very slight amount of change will cause the tone to increase in frequency. Power requirement 6 to 12 v DC. Size: .8" x 1.2".

Part No. 31ERLD1 • Price $9.75

VOICE ACTIVATED SWITCH

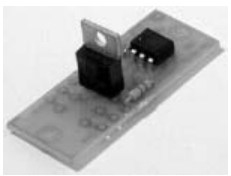


The VOX circuit can be used to operate a tape recorder, ham radio, CB radio, or turn on an alarm. The VOX-1 kit has 100MA of output that operates a relay, light, motor. What could you do with a sound activated switch? Power requirement 7.5 to 18v DC. Size: 1.5" x 1.3"

Part No. 31ERVOX1 • Price $6.75

TRIAC POWER KIT

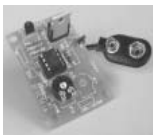
INCREASE THE OUTPUT OF ANY KIT FROM 100 MA TO 4 AMPS



Connect to any of the Light Genie, Temperature Genie, Vox or Timer kits, and operate up to 400 watts of power. The Triac is best suited for resistive load applications such as heaters and lights. Size: .75" x 2"

Part No. 31ERTP1 • Price: $9.75

WATER ALARM



Liquid level sensor. When fluid reaches sensor, 100mA output can trigger a relay (not included) which in turn can activate (or turn off) a sump pump.

Wall transformer included

Part No. 32ERWA2 • Price: $17.75

BUSY PHONE LIGHT

Add this little kit to any or all of your telephones. When one phone is used, a red LED will light on the other extension. This lets everyone know when your computer modem is in use. Power requirement 9v DC. Size: 1.1" x .6"

Part No. 31ERTELLITE • Price $9.75

ELECTRONIC TIMER KIT

Use this kit in A-STABLE (continuous train of pulses) or in the MONO-STABLE (triggered time delay). Times circuits from nano-sec. to 30 min. Comes with variety of resistors and capacitors suitable for most applications. Power requirement: 4.5 to 12v DC. Size: 9" x 1".

Part No. 31EREBTD-9 • Price $11.50

LIGHT GENIE

Turn anything on or off with light. Turns on at night, off at daylight automatically. As the light touches or leaves the sensor it delivers 100mA of output to run a relay. Size: 1.5" x 1.2". Power requirement 6 to 15v DC.

Part No. 31ERLG2 • Price $7.50

TEMPERATURE GENIE

Ever lost frozen food because your freezer stopped? The TC-2 kit would have saved you money. An alarm activates when the temperature reaches a critical point. Turn ceiling fans on automatically when it gets too hot. This kit gives you 100mA of output. Size: 2" x 1/4" Power requirement 6 to 15v DC.

Part No. 31ERTC2 • Price $7.50

EDUCATIONAL KITS

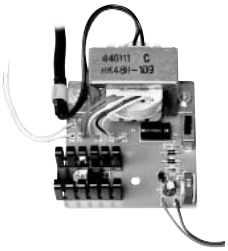
FM WIRELESS MICROPHONE

This kit contains a microphone with a tiny transmitter. It can be easily built in an hour or so. All you need, to receive it, is a standard 88-108MHz FM receiver.

Part No. 32FMWM • Price: $5.50

AC/DC POWER SUPPLY KIT

MODEL K-11



Low cost 1 to 15V variable Power Supply. It can be used to supply power to transister radio, tape recorder and electronic games etc.

Features:
DC Output - 0-15V @ 250mA
AC Output - 8.5Vac @ 500mA
Size: 3" (W) x 3 3/8" (L)

Part No. 32VPS-1 • Price: $14.50

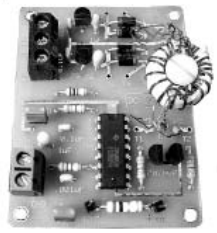
VARIABLE VOLTAGE POWER SUPPLY KIT

Includes:

Input Voltage: 20VAC
Output Voltage: 1.25 VDC ~ 15VDC
Output Current: 0.5A @8V, 0.3A @ 12V, 0.2A @15V
Deluxe kit, includes all components, transformer, power cord and case.

Part No.	1-9	10+
3200XP15	$17.95	$16.50

DC TO DC CONVERTER KIT



Generates regulated +12V and -12V voltages from a 9V source such as a 9V battery. This kit is designed to teach the basics of switchmode circuits. You wind your own toroidal transformer. Test points are provided to view switching waveshapes on an oscilloscope. An on-board 1 Ohm resistor in series with ground allows measurement of current drawn from 9V supply. Calculate efficiencies at various loads. Outputs can have an isolated ground or a common ground with input via jumper.

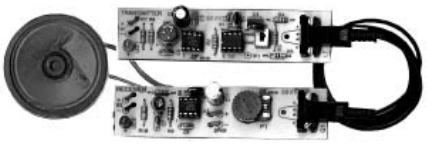
Part No. 3200DCCONKIT • Price: $19.50

AUTOMATIC STREET LIGHT KIT

- This kit simulates a street light
- Light turns on after evening and turns off in the morning

Part # 32PWM270006 • Price: $5.95

OPTICAL AUDIO LINK



Easy to assemble voice link. Transmitter and receiver on separate PC boards. Great for learning the basics of fiber optic communications. Includes fiber optic devices, cable and connector. Requires 2 – 9V batteries *(not included)*.

Part No. 3200OK726 • Price $13.90

TRANSISTOR/DIODE TESTER

Build your own diode/transistor tester. This tester allows checking of transistors and diodes in circuit. You can identify NPN or PNP transistors. Also check all types, small or large power transistors. Identifies anode or cathode of diodes.

Part No.	Description	Price
32TDTKIT	Kit	$22.95
32TDTASM	Assembled	34.95

FUNCTION GENERATOR

Provides sine, square or saw tooth waveforms continuously variable 1Hz to 1MHz. Amplitude adjustable to 3V peak to peak. Complete with parts, PC board, schematic, deluxe case with handle and extensive assembly manual.

Product size assembled, 5-3/4(L) x 3-3/4(W) x 1-1/2(D) inches and weight 0.94 lbs.

Part No.	Description	Price
32FGKIT	Kit Version	$32.95
32FGSMTKIT	Kit Version w/Surface Mount Components	37.95
32FGASM	Assembled Version	48.95

AmeriKit™ MOTION DETECTOR KIT

Compact and portable. Adds safety to your home or office. Learn the basics of motion detector technology. Uses a pyroelectric infrared sensor. Simple and fun to build. Battery operated. Complete with all parts, PC board, case, schematic, and extensive training manual.

Part No. 32KMD • Price $18.95

RSR SOLDER PRACTICE BOARD

MODEL 3200SPB3

The RSR Solder Practice Board is designed to teach tech enthusiasts, beginner students, and hobbyist to learn the basics of good soldering techniques. The soldering kit contains a variety of component parts, including resistors, diodes, integrated circuits (ICs), and capacitors, that can be soldered to the printed circuit board (PCB) to practice soldering.

Once the soldering techniques are learned, the main portion of the PCB and its component parts can be soldered to the board. The main PCB circuit is a police siren. When the switch is in the "ON" position, you will hear the shrill of a siren while the green and red LEDs will blink on and off simultaneously. Test your work by using a 9V battery (not included).

Board dimensions: 3.75" x 2.00"

Part No. 3200SPB3 • Price: $4.95

NIGHT LIGHT KIT

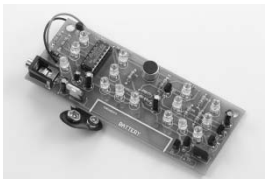
It uses a photo cell to turn on or off LED.

Part No. 3200NTLTKIT • Price: $3.50

RSR VOICE CHANGER

This kit will enable you to change tone of your voice. With the push of a switch, the tone frequency can be adjusted up or down, or change to a robot's tone.

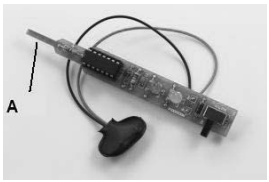
Part No. 32VC • Price $10.95



SOUND ACTIVATED KIT

Clapping your hand or shouting will activate LED's to say "ILU"

Part # 32PWM270010 • Price: $9.90



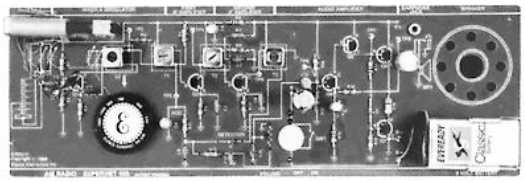
E FIELD SENSOR KIT

This kit is a low cost E Field sensor by detecting the E field on electromagnetic waves

Part # 32PWM270004 • Price: $5.95

AmeriKit AM RADIO KIT

MODEL AM-550

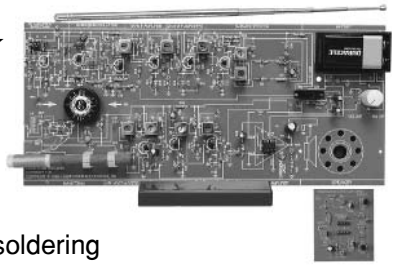


$10\frac{1}{2}$" x $3\frac{1}{2}$" PC board, 28-page manual divided into 54 sections; RF, 1F, oscillator, detector and audio circuits.

Part No.	Description	Price
32AMR	With Trans Amp	$18.95

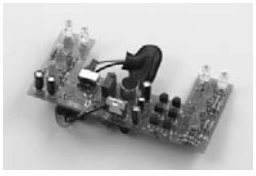
AmeriKit AM/FM SUPERHET RADIO KIT

MODEL AM/FM108CK CONTAINS TWO SEPARATE AUDIO SYSTEMS: IC & TRANSISTOR



- Advanced kit, requires soldering
- 63 page educational instruction manual complete with quiz questions, soldering tips, component identification, conversion charts
- Coverage includes but not limited to: alignment, static and dynamic measurement,
- Bandwidth tests conveniently features two separate audio sections to accommodate instructors who prefer either IC or transistor design

Part No.	Description	Price
32AMFM108CK	with IC & Transistor	$26.95



VU METER LIGHT

LED's would light up according to the sound level of the speaker

Part # 32PWM270009 • Price: $7.90

FLASHING COLORFUL CROSS

This is a simple circuit with big fun. The LED from L1 to L2 will flash in a colorful and random manner

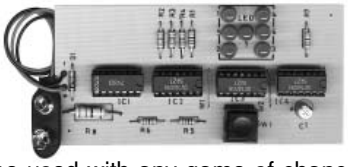
Part # 32PWM270002 • Price: $7.95

EDUCATIONAL KITS

COMPLETE WITH PC BOARD AND INSTRUCTION BOOKLET

RSR

DICE PROJECT



Can be used with any game of chance. Uses a 9V battery (not included).

Part No. 3200EDP • Price: $5.95

RSR

ANALOG METER KIT

For details see Model No. 01AMK200 on ***EQUIPMENT PAGE 23.***

Part No.	1-9	10+
01AMK200	$18.95	$17.95

DIGITAL MULTIMETER KIT

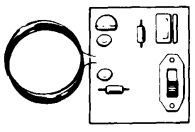
WITH CAPACITANCE/ HFE CHECKER

For details see Model 2666K on ***EQUIPMENT PAGE 8***

Part No.	1-9	10+
01DMM2666K	$38.95	$36.95

METAL DETECTOR KIT

Find new money and old treasure. Get started in the fascinating hobby of metal detecting.



Part No. 3200MDK • Price: $7.25

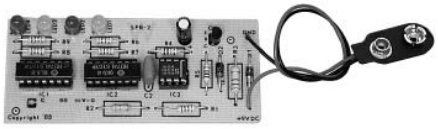
ROULETTE

- Auto power-off; Low power consumption
- Power supply: 3 AA battery operation *(not incl.)*
- **Dimensions:** 3.6" x 1.3"

Part No. 32VKMK119 • Price: $15.95

RSR

SOLDER PRACTICE KIT

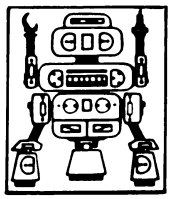


Learn all about soldering techniques while building this project. Uses a 9V battery (not included).

Part No. 3200SPB2 • Price: $3.95

LED ROBOT KIT

This project teaches you about free-running oscillators. You will have fun building, displaying, and learning, about LED Robot Blinkers.



Part No. 3200LRK • Price: $5.95

RESISTOR SUBSTITUTION BOX KIT

This easy-to-assemble kit contains 24 different value resistors from 10 ohms to 1M ohms.

Part No.	Prices
3200SUBK (Kit)	$13.95
3200SUBA (Assembled)	21.95

CAPACITOR SUBSTITUTION BOX KIT

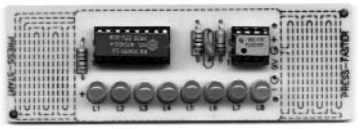
This easy-to-assemble kit contains 24 different value capacitors from 100pf to .1 fd.

Part No.	Prices
32CSBK (Kit)	$14.95
32CSBA (Assembled)	23.95

RSR

FUN LIGHTS

ALSO AVAILABLE IN SURFACE MOUNT VERSION

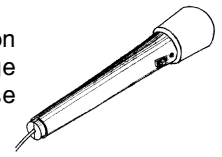


Lights move left to right one at a time or in groups. Insert 9V battery to turn Fun Lights on. Movement speed can also be easily controlled. (*Battery not included)*

Part No.	Descr.	Price
3200FUN LIGHT	Regular Kit	$4.95
3200SMTFUN	Surface Mount Version	5.95

FM MICROPHONE KIT

Transmit your voice on any FM radio. Range up to 100 feet. Case included.



Part No. 3200FMMIC • Price: $12.95

FLASHING COLORFUL CROSS

This is a simple circuit with big fun. The LED from L1 to L2 will flash in a colorful and random manner

Part # 32PWM270002 • Price: $7.95

FLASHING CHRISTMAS TREE

LED's will flash in a colorful and random manner

Part # 32PWM270001 • Price: $6.25

RSR

POWER SUPPLY KIT

MODEL 3010K

Three supplies +1.5V to +15V ; -1.5V to -15V ; +5V. Short circuit and overload protected.

Part No. 01PS3010K • Price: $67.90

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